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ABSTRACT

This handbook and companion workbook were developed to help faculty members at Red Deer College incorporate learning skills objectives into the curriculum. The handbook consists of two learning modules, each including statements of objectives, lists of learning activities, and information sheets. Module 1: defines learning skills as strategies employed by a student to make his/her learning more efficient and effective; discusses the importance of attitudinal and metacognitive abilities in learning; considers the input, processing, and output skills needed to deal with information; and lists instructional formats for teaching learning skills. Module 2 begins with a bibliography of relevant materials and a list of on-campus resource people. It also includes guidance on: identifying the learning skills needed by students in the course or program, setting broad objectives for the course, evaluating instructional effectiveness, motivating students to develop learning skills, and class planning. In addition, the module suggests a number of strategies for integrating learning skills into classroom activities. Appendixes contain handouts for students on a four-step problem-solving model, the meaning of key words used in essay questions, notetaking formats, preparation for exams, a textbook reading strategy, time management, and other learning skills. A case study of the integration of learning skills into an Educational Foundations course and an annotated bibliography of resources in the college library are also included. The accompanying workbook is to be used by the instructor to test his/her progress and keep notes, for future on the research and planning accomplished. (ABL)

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INTEGRATING LEARNING SKILLS INTO THE CURRICULUM:

A HANDBOOK AND WORKBOOK

BY

Glynis Wilson Boultbee

and

Robert Anderson

Red Deer College

July 1989

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INTRODUCTION

This Handbook and the companion Workbook have been designed for the faculty member who wishes to incorporate some learning skills objectives into the curriculum. We believe that learning skills are very important for students and that good planning before a course begins will allow the instructor to meet both content and learning skills objectives.

Before beginning to work on incorporating learning skills into the curriculum, it is useful to review the rationales for teaching learning skills at all. These will vary from instructor to instructor, but will probably include at least some of the following:

1. Students who can think and learn will get more from their college experience than those who are trying to figure out "the system." They will expend energy on learning the content instead of struggling to learn how to learn.

2. Students who can think and learn will undergo less stress and therefore will perceive learning to be stimulating and challenging, rather than stressful and difficult.

3. Students who know how to think and learn will be more effective in the jobs and learning situations they encounter after they leave Red Deer College. They will thus have the skills they need to succeed in the future.

4. Students who can think and learn will be more effective citizens.

This handbook will help you to facilitate your students' learning. The Handbook provides information and lists activities you may do in order to integrate learning skills into the curriculum. Module One will help you learn more about various learning skills. Module Two will help you to plan classroom activities, motivation techniques, and evaluation procedures. Please note the Appendices in the Handbook. Appendix One provides summaries and/or handouts on a variety of topics. Appendix Two reviews special learning skills needs for alternate delivery methods. Appendix Three outlines one instructor's efforts to integrate learning skills into his classroom. And Appendix Four provides an extensive annotated bibliography of books, audio visual materials and articles on various learning skills.

While the Handbook mainly provides information, the accompanying Workbook is to be used by the instructor as a notetaking device. After gathering information from the Handbook or elsewhere, the instructor records the most important points in the Workbook for future reference. Thus after having completed the Workbook, the instructor is left with a permanent record of the research done on learning skills and of the planning done before classes are offered.

As you are working with these materials, please keep in mind that assistance is a phone call away. Feel free to phone Glynis Wilson Boultbee (342-3168) who will help you herself or put you in touch with someone who can help.

Glynis Wilson Boultbee
Bob Anderson

MODULE ONE

BACKGROUND BASICS

OBJECTIVES: After working through this module, the learner should be able to:

A. Define the term "learning skills."

B. Define "attitudinal abilities" and "metacognitive abilities" as they relate to learning.

C. Identify some of the specific skills and abilities which fall under the broad categories of learning skills, attitudinal abilities, and metacognitive abilities.

D. List the formats for teaching learning skills and identify the pros and cons of each format.

MODULE ONE

BACKGROUND BASICS

OBJECTIVES: A. Define the term "learning skills."

B. Define "attitudinal abilities" and "metacognitive abilities" as they relate to learning.

LEARNING ACTIVITIES

1. Read Information Sheet #1.(next page)

2. Complete the Self-Test in the Workbook.

MODULE ONE

OBJECTIVES A AND B

INFORMATION SHEET #1

Learning Skills - are defined here as skills which a student employs to make his or her learning more efficient and/or effective. Using these skills, the student can deal with information as it is taken in, processed, and communicated back out. For example, a student may need to improve his or her listening skills (input), memorizing skills (processing), or writing skills (output).

Learning skills are often improved by the development of complex strategies which may cover several skill areas. For example, SQ3R is a textbook reading strategy which incorporates several skills:

Survey - a quick preview of the chapter (input)
Question - asking questions as you preview (processing)
Read - a more thorough reading (input)
Recite - reciting aloud the material that has been read (processing and/or output)
Review - reviewing text and notes to ensure information is retained (input and/or processing)

Attitudinal Abilities - The attitudes a student brings to learning are crucial to the successful use of learning skills. The ability to persevere in the face of frustration, the ability to motivate oneself, and other similar abilities are so important that they may in fact determine whether a student is successful. A student may, for example, be able to use the SQ3R strategy to read a textbook chapter. If, however, the material is "dry," the student may lack the motivation to work through the chapter in anything more than a cursory manner. Thus, the attitude has undercut the effective use of a strategy that the student normally uses.

Metacognitive Abilities - When engaged in learning, successful students know what learning skills to use, know how to monitor their learning, and know that it may be necessary to adjust learning skills and strategies periodically. These elements of learning are just as important as learning skills and attitudinal abilities.

The student who is about to attack the dry textbook chapter, for example, must first know that SQ3R is a useful strategy to use when reading the textbook chapter. Then, the student must constantly monitor the effectiveness of the strategy by asking questions. ("Am I previewing the important material?"; "How quickly should I be reading?"; "What kinds of information should I recite aloud and when should I recite?"; etc.) Finally, the student must make changes if a strategy is not working. ("I don't think I'll recite at the end of each paragraph. It's too disruptive. I'll wait and summarize larger sections of the chapter aloud instead.")

MODULE ONE

BACKGROUND BASICS

OBJECTIVE: C. Identify some of the specific skills and abilities which fall under the broad categories of learning skills, attitudinal abilities, and metacognitive abilities.

LEARNING ACTIVITIES

1. Read Information Sheet #2.(next page)

2. Complete the Self-Test in the Workbook.

MODULE ONE

OBJECTIVE C

INFORMATION SHEET #2

LEARNING SKILLS - (the skills students need in order to deal with information)

Input: indicates the skills needed to take information in.

Processing: indicates the skills needed in order to think about, reflect on, and otherwise process the information that was taken in.

Output: indicates the skills needed to deliver the information back out after it has been processed.

Note that some learning skills can fall under two of the above categories. For example, notetaking is listed below under processing, but it might also be classed as an output activity.

Input: listening viewing reading

Processing: memorizing preparing for and writing exams asking questions researching notetaking from textbooks and lectures using the library problem-solving

Output: writing speaking

ATTITUDINAL ABILITIES - (the abilities which allow the student to develop an attitude that facilitates learning)

dealing with procrastination developing motivation developing confidence concentrating developing self-discipline

METACOGNITIVE ABILITIES - (the abilities needed to recognize one's own learning skills, to monitor the effectiveness of those skills, and to make adjustments when necessary)

knowing own learning style managing time setting goals setting priorities monitoring effectiveness of study habits knowing how to correct learning problems.

NOTE: IN THE REST OF THE HANDBOOK AND WORKBOOK, THE TERM "LEARNING SKILLS" WILL REFER TO ALL OF THE ABOVE SKILLS AND ABILITIES.

MODULE ONE

BACKGROUND BASICS

OBJECTIVE: D. List the formats for teaching learning skills and identify the pros and cons of each format.

LEARNING ACTIVITIES

1. Read Information Sheet #3.(next page)

2. Complete the Self-Test in the Workbook.

MODULE ONE

OBJECTIVE D

INFORMATION SHEET #3

Learning skills may be taught using a number of formats, including the following:

1. Individual assistance - is offered through the Learning Assistance Centre. The student who needs personal and perhaps long term instruction may benefit from the attention and support of an LAC instructor. A student may also receive individual assistance from his or her content instructor - if the instructor has time. This method of instruction is very time intensive, but crucial for some students.

2. Workshops - for the student body or a particular program provide students with an overview of particular learning skills. Less personal than the individual assistance, these workshops can nonetheless be very valuable - particularly for those students who only need an overview to learn or remember strategies that they can put to good use.

3. Self-Instructional Materials - are available through the Learning Assistance Centre. Students can use self-paced print materials, audio tapes, or computer software to build their learning skills. Usually the students discuss their needs with an LAC instructor who then suggests which resources would be helpful. Self-instructional materials are beneficial for students who want flexibility and independence when dealing with their learning skills needs. When designing a self-instructional program, the instructor can also take into account learning preferences. (For example: Auditory learners can be given taped programs.) Students working on their own (or with minimal supervision) do need to make a firm commitment and manage their time effectively. If they don't, they may not complete the program.

4. In-Class Presentations - by a Learning Assistance Centre instructor or other learning skills expert provide students in a particular class with information about (and some practice with) learning skills. The content instructor identifies what the students need in order to become more effective learners. The specialist then designs a class or classes to suit both the student's needs and the content of the course. This format ensures that all students in the class receive the instruction. Students may also be more likely to appreciate the importance and relevance of learning skills if the content instructor 1. gives up regular class time and 2. reflects back on the lesson(s) frequently later in the term.

5. Integration into the Curriculum - involves offering learning skills instruction as part of the curriculum. The instructor (or program) decides which learning skills should be taught. Learning objectives are set and learning activities designed. The learning skills are therefore perceived as being an integral part of the course or program. The instructor becomes a learning skills expert who can address the students' needs in a flexible, on going manner.

MODULE TWO

PLANNING FOR INTEGRATION

Objectives: After working through this module, the learner should be able to:

A. Identify and review resources which will be helpful to the instructor as he/she begins to plan for integration.

B. Identify and interview people at RDC who may be consulted by the instructor who wishes assistance in planning for integration.

C. Identify the learning skills which are needed by students in the course/program.

D. Set broad objectives which identify what learning skills the students should know or be able to do upon completion of the course/program.

E. Identify the procedures which the instructor will follow when evaluating the effectiveness of the integration.

F. Identify strategies for motivating students to accept and participate in the learning skills component of the course/program.

G. Develop an instructional plan which achieves the learning skills objectives identified above.

MODULE TWO

PLANNING FOR INTEGRATION

OBJECTIVE: A. Identify and review resources which will be helpful to the instructor as he/she begins to plan for integration.

LEARNING ACTIVITIES

1. Review Information Sheet #1. (next page)

2. In your Workbook (under Learning Activity #1), list the resources you would like to review initially.

3. You may want to do your initial reading now. If so, make notes and file them in the Workbook. You may, however, wish to complete all or part of Objective B first. If so, simply return to this learning activity later.

MODULE TWO

OBJECTIVE A

INFORMATION SHEET #1

These resources provide a general overview of learning skills. Ellis and McWhorter are student texts. The rest of the resources are written for instructors. If you are already familiar with learning skills, you may wish to skim these resources or simply skip to the next objective.

BOOKS

Algier, A.S. and Algier, K.W. (eds.) Improving reading and study skills. Jossey-Bass, 1982. 99p. (LB 2361.5.N4 no. 8)

Ellis, D.B. Becoming a master student. 5th ed. College Survival, 1985. 344p. (LAC LB 2343.3.E44 1985 and LB 2343.3.E44 1985)

McWhorter, K.T. College reading and study skills. 2nd ed. Little, Brown, 1983. 375p. (LAC LB 2395.M37 1983)

Tabberer, R. and Allman, J. Introducing study skills: and appraisal of initiatives at 16+. Nelson, 1983. 198p. (LAC LB 1049.T3 1983)

ARTICLES

Heller, M.F. "How do you know what you know? Metacognitive modeling in the content areas." Journal of Reading, 29:415-422, February, 1986.

Herrington, A.J. "Classrooms as forums for reasoning and writing." College Composition and Communication, 36:404-413, December, 1985.

Long, J.D. & Long, E.W. "Enhancing student achievement through metacomprehension training." Journal of Developmental Education, 11: 2-5, September, 1987.

Smith, B.L. "Writing across the curriculum." [symposium] Current Issues in Higher Education, (3):1-38, 1983/84.

Weinstein, C. "Learning strategies: the metacurriculum." Journal of Developmental and Remedial Education, 5(2):6-7+, 1982.

MODULE TWO

PLANNING FOR INTEGRATION

OBJECTIVE: B. Identify and interview people at RDC who may be consulted by the instructor who wishes assistance in planning for integration.

LEARNING ACTIVITIES

1. Review Information Sheet #2.(next page)

2. In your Workbook (under Learning Activity #2), list the people you would like to consult initially.

3. You may want to consult these people now. If so, make notes and file them in your Workbook. You may, however, wish to wait. If so, return to this learning activity later.

MODULE TWO

OBJECTIVE B

INFORMATION SHEET #2

PEOPLE AT RED DEER COLLEGE WHO CAN BE OF ASSISTANCE

NAME	DEPARTMENT	INTEREST/AREA OF EXPERTISE
Bob Anderson	Education	learning skills expertise
Mary Lou Armstrong	Library (LRC)	library skills expertise
Sharon Comstock	Counselling	time management; procrastination
Laurel Goodacre	Phys Ed/Gen St	notetaking; essay writing in the content areas
Ed Kamps	CPP	professional development assistance; instructional skills; learning skills expertise
Brian Stackhouse	B.Sc. and Tech	exam preparation/anxiety
Glynis Wilson Boultbee	LAC	learning skills expertise; instructional skills
Ralph Wold	LAC	learning skills expertise

MODULE TWO

PLANNING FOR INTEGRATION

OBJECTIVE: C. Identify the learning skills which are needed by students in the course/program.

LEARNING ACTIVITIES

1. In your Workbook (under Learning Activity #3), fill in the Checklist of Learning Skills with the students in your classes or program in mind. If you use alternate delivery methods to teach your course, refer to Appendix One which reviews some of the learning skills needed when learning in an alternate delivery course. If you are satisfied that the list is complete and feel you understand the learning skills well enough to set objectives and plan instructional activities, move to #8 below. If not, do the activities outlined in 2-7 before moving to #8.

2. Review Appendix One which provides one page summaries and/or handouts on a number of study skills topics.

3. Review the "Annotated Bibliography" (Appendix Four of the Handbook) to identify further books, audio visual materials, and articles to use when selecting learning skills. If you are particularly interested in articles, you will want to review the binders available in the Learning Assistance Centre. These binders include summaries of articles (and in some cases the articles themselves) on the following topics: Study Skills, Exam Preparation, Mapping, Metacognition, Notetaking, Reading/Writing/Thinking Across the Curriculum, Stress and Anxiety, Time Management and Procrastination.

4. In your Workbook (under Learning Activity #4), compile a list of books, AV materials, and articles to review.

5. Read resources compiled in list above. Take notes and file them in the Workbook.

6. You may find it useful to interview good and poor students in your program. The good students will help you to learn more about what makes them successful. Talking to the poor students about their learning habits can also be enlightening. File your notes from these interviews in your Workbook.

7. Go back to the Checklist of Learning Skills (Learning Activity #3 in your Workbook) and make changes if necessary.

8. Based on the Checklist completed in #1 and/or the activities completed in #2-6, develop a list of those learning skills you would like to cover in your course/program. Record this list in the Workbook (under Learning Activity #5). Keep in mind that your list should not be too long. Try to be realistic about what you can accomplish.

MODULE TWO

PLANNING FOR INTEGRATION

OBJECTIVE: D. Set broad objectives which identify what learning skills the student should know or be able to do upon completion of the course/program.

LEARNING ACTIVITIES

1. Using the list of learning skills created in Objective C (Learning Activity #5), list broad learning skills objectives for your course/program in Learning Activity #6 in the Workbook.

2. If you are unclear about how to set objectives, you may wish to refer to Robert F. Mager's Preparing Instructional Objectives (LB 1028.5 M2 1975 and LAC LB 1028.5 M2 1962) or to discuss objective writing with a colleague. (Red Deer College facilitators are trained in setting objectives and would no doubt be happy to assist you. The faculty development animateur can be of assistance in linking you with a facilitator.)

MODULE TWO

PLANNING FOR INTEGRATION

OBJECTIVE: E. Identify the procedure which the instructor will follow when evaluating the effectiveness of the integration.

LEARNING ACTIVITIES

1. Scan Information Sheet #3, 4, and 5. (next pages)

2. In your Workbook (under Learning Activity #7), answer the questions about your plans for evaluation. You may wish to refer back to Information Sheet # 3 (next page) when answering the questions.

3. Design your evaluation instrument(s). You may wish to defer this activity until you have done further planning. We do recommend, however, that you complete the evaluation instrument(s) before the implementation of your plans. File your notes on evaluation in your Workbook.

MODULE TWO

OBJECTIVE E

INFORMATION SHEET # 3

Types of Evaluation

Formal	Informal
pre- and post-tests	class discussion
research studies	instructor report: impressions/observations
questionnaires	interviews
	SGIF (small group instructional feedback led by a colleague)

Elements to Evaluate

activities undertaken: strengths and weaknesses of the program

instructor and student satisfaction with outcomes: including suggestions for change next time

changes in students:

- knowledge changes: objectives met -- knowledge of learning skills needed in program increased
- attitudes changes: perception of benefits, relevance, appppropriateness of learning skills instruction increased
- skills changes: objectives met -- student use of skills increased
- other changes: marks improved; less withdrawls and failures

When to Evaluate

Ongoing throughout the course

Just before or after midterm

End of course

Later (eg. one year follow-up)

MODULE TWO

OBJECTIVE E

INFORMATION SHEET #4

Sample Student Questionnaire

STUDENT EVALUATION OF EDUCATION FOUNDATION 201 LEARNING SKILLS COMPONENT

AS A RESULT OF THE EMPHASIS ON LEARNING SKILLS IN THIS CLASS:

1. Are you reading and taking notes differently?
   Yes ___ No ___ Please explain:

2. Are you preparing for and/or writing exams differently:
   Yes ___ No ___ Please explain:

3. Are you able to better communicate your ideas when writing?
   Yes ___ No __ Please explain:

4. What did you like best about this approach?

5. What did you like least about this approach?

6. Should an emphasis on Learning Skills be included in this course again?
   Yes ___ No ___ Please explain:

MODULE TWO

OBJECTIVE E

INFORMATION SHEET #5

Sample Pre- and Post-Test Activities

WRITING:

Collect a short sample of the students' writing at the beginning and end of the course. Analyze the samples with your objectives in mind. (ie. If the focus will be on organization, analyze the organization, not the grammar.)

READING AND NOTETAKING:

Hand out a short article on some aspect of the content of the course and ask students to take notes as they normally would. Ask them to hand in the notes. Analyze the notes, looking for organization and number of main ideas and details listed. Repeat at the end of the course and compare.

LISTENING SKILLS:

Deliver a mini-lecture or full lecture and ask students to take notes as they normally would. Ask them to hand in the notes. Analyze the notes, looking for organization and the number of main ideas and details listed. Repeat at the end of the course and compare.

TIME MANAGEMENT:

Ask the students to identify time management problems experienced during the first week of classes using a formal questionnaire or a more informal reporting mechanism. At the end of the course, use the same mechanism and compare the type and severity of time management problems.

PREPARING FOR AND WRITING EXAMS:

Using a formal or informal approach, ask students to report the activities they engage in before and during exams. Ask during first weeks of class and then repeat at the end of the course.

ATTITUDINAL ABILITIES:

Administer a questionnaire which measures student attitudes at the beginning of term and then at the end of the course.

MODULE TWO

PLANNING FOR INTEGRATION

OBJECTIVE: F. Identify strategies for motivating students to accept and participate in the learning skills component of the course/program.

LEARNING ACTIVITIES

1. Read Information Sheet #6 (next page).

2. In your Workbook (under Learning Activity #8), read the six questions for motivation planning. We suggest you use this set of questions when you are planning your instructional activities. (You may wish to refer to Information Sheet #6 when answering the questions.) For a more extensive review of the motivation issue, you may also wish to refer to Raymond J. Wlodkowski's Enhancing Adult Motivation to Learn (LC 5219 W53 1985), a joint publication of the Jossey-Bass higher education series and the Jossey-Bass management series.

MODULE TWO

OBJECTIVE F

INFORMATION SHEET # 6

Strategies to Motivate Students to Learn Learning Skills

Some students may not see the relevance of learning skills instruction. They may not feel sufficiently motivated to learn about learning. While you cannot ensure that all students will become motivated, you can anticipate the motivation issue and develop a plan for dealing with it. This Information Sheet reviews some general strategies for motivating students which you may wish to incorporate into your instructional plans.

1. Provide convincing rationales and clear benefits that result from learning about learning skills. (See Information Sheet #7 next page)

2. When teaching learning skills, provide highly relevant and interesting material with which they can become actively involved.

3. If improvements they have made can be linked to their work on learning skills, point this out to them.

4. Model the behaviour you want them to exhibit. (For example, an instructor teaching time management will be more convincing if he seems to be in control of his own time.)

5. Ensure that their learning moves beyond the knowledge level to the application level so that they are able to use the skills.

6. Deal with students who seem to disagree with the time spent on learning skills as soon as possible.

7. Explain the difference between the short-term and long-term benefits of working on learning skills. Explain that the work may not immediately seem to pay off, but that it will in the long run.

8. Explain the relevance of the skills to other courses they are taking -- or, better still, ask them to explain it.

9. Make provisions for contracting if you believe the students may not otherwise complete the work.

10. Share personal experiences from your student days which show that you too struggled with learning skills.

11. Assign regular or bonus marks for learning skills work.

MODULE TWO

OBJECTIVE F

INFORMATION SHEET # 7

RATIONALES FOR LEARNING LEARNING SKILLS

1. Learning Skills

Most businesses today require employees who both know the content pertaining to their job and know how to learn new job ideas/content. The student who has learned how to learn has a competitive edge in the job market.

2. Listening

Research indicates that college students listen at about 35% efficiency. Improvement of listening can significantly improve lecture notes and overall retention of the material.

Many business people spend up to 80% of their working hours either listening or acting on what they hear.

In a matter of hours, untrained listeners lose 75% of what they hear.

3. Mapping

Many studies indicate that students who use mapping have greater recall and greater comprehension of the material.

4. Metacognition

Studies indicate that use of metacognitive strategies increases reading comprehension and retention.

5. Notetaking

Studies indicate that notetaking from lectures and textbooks results in greater recall of information, as well as more active (and therefore efficient) learning of material.

A 1983 study, for example, found that when information is correctly reflected in notes, students remember the information 78% of the time; when the notes do not include information, that information is remembered only 34% of the time.

6. Prereading

One study indicated that after prereading, students read 24% faster and just as accurately.

7. Reviewing

One other study indicates the following about the importance of reviewing:

Days after Reading	Amount Remembered with No Review	Amount Remembered with Review
7	33%	83%
63	14%	70%

8. SQ3R

One study indicates that after learning SQ3R a student's average reading rate increases by 22% while the comprehension level increases by 10%.

* * * PLEASE NOTE * * *

If you come across further rationales for learning learning skills, please send them on to the authors who will incorporate these rationales into the next revision of this document.

MODULE TWO

PLANNING FOR INTEGRATION

OBJECTIVE: G. Develop an instructional plan which achieves the learning skills objectives identified in Module Two, Objective D.

LEARNING ACTIVITIES

1. Read Information Sheet #8 in the Handbook. (next page)

2. Complete the Self-Test in the Workbook.

3. Review the sample Instructional Plans presented in Learning Activity #9 the Workbook. (Note: There are four instructional plans included in Learning Activity #9.)

4. Review Information Sheet #8 in your Handbook for further integration ideas.

5. Review Appendix Two for information about Alternate Delivery and Integration.

6. You may also wish to review Appendix One which provides one page summaries and/or handouts on a variety of study skills topics.

7. Using the Instructional Plan forms found in Learning Activity #10 in the Workbook (or using your own format), begin making plans for your course. You may wish to review notes you made earlier or do more reading. If you are unsure of what to read at this point, call Glynis Wilson Boultbee for suggestions.

8. If you would like an objective reaction to your plans, Glynis Wilson Boultbee or Bob Anderson will be happy to provide feedback.

9. Go out and try it! GOOD LUCK (and don't forget to evaluate the success of your efforts.)

MODULE TWO

OBJECTIVE G

INFORMATION SHEET #8

The Planning Process

The following process can be used to plan for integration. At any point in the process you may wish to stop to do further reading or to discuss the process with a colleague.

1. Use broad learning skills objectives to create more detailed objectives.

2. Decide where the objectives might fit with course content.

3. Identify rationales for teaching the learning skill(s).

4. Identify the general plan for teaching the learning skills component and course content together.

5. Identify motivating techniques that might be used with the general plan as outlined.

6. Outline more specific procedures for teaching the skill(s).

7. Plan individual lesson plans.

MODULE TWO

OBJECTIVE G

INFORMATION SHEET #9

Integration Ideas

ABSTRACT WRITING

Ask students to write an abstract of a chapter or reading. Encourages skills in summarizing and identifying main ideas.

AUDIO VISUAL MATERIALS ON LEARNING SKILLS

Present short audio visual presentations on learning skills at the end of a class periodically. Ask students to write a short journal commenting on the value of the presentation and its relationship to their own study habits. Encourages reflection on learning proceses and development of viewing skills.

AUTHENTIC WRITING

Ask students to write something that can be used: letter to the editor, inquiry about job requirements to someone employed in their field, letter of protest to government officer about aspect of their field of study, job application, etc. Encourages students to appreciate writing as valuable and practical tool.

BOOK REPORTS

Ask students to write report on book about some aspect of the course content or learning skills: Overcoming Math Anxiety for math students, Making the Grade for students with exam writing troubles, The Double Helix for science students, etc. Encourages students to read and summarize their reading -- particularly useful in courses with highly technical texts.

COURSE LOG

Ask students to keep a weekly (or biweekly or monthly) log of thoughts about their learning in the course -- to be handed in periodically or at end of course. Very popular method of encouraging students to reflect on their learning and to write.

DEADLINES: FAIR BUT FIRM, STUDENT SET

Ask students to identify the deadlines for their assignments and then sign contracts. Inform the students that once the deadlines have been set, extensions will not be granted. Encourages students to take responsibility for their own learning and to develop good time management skills. Firm deadlines decreases likelihood of procrastination.

DIRECTED READING

Quickly introduce students to SQ3R method of text reading. Then during one to two classes, take students through the process using a relatively simple chapter of their text (ie. the introductory chapter). Because you will be there to answer questions while they work on their own, you will not have to lecture on content in class time. Encourages development of good text reading habits.

DISCUSSIONS ON LEARNING SKILLS

Conduct periodic short discussions on learning skills being used for course. An ideal time is just before or after midterm. Can be done as a class or with class divided into smaller groups. Encourages reflection on learning skills and may encourage development of informal study or support groups among the students.

EXAMS WRITTEN BY STUDENTS

Ask students to create some the questions for their exam or ask them to create the questions for a practice exam to be done in class or at home. Students may come up with very good questions that therefore makes exam writing more interesting for instructors. Encourages students to think about the questions on exams -- not just about the answers.

FREEWRITING

Ask students to write quick, informal answers to questions in preparation for class discussion. Can be assigned at the end of the class before or at the beginning of the class in which the discussion will take place. Encourages students to write and think. May demonstrate to them the value of thinking and writing before classes begin as a preparation method.

INTERVIEWS

Ask first year students to interview students in the next level up to determine what learning skills they will need. Both first year students and upper level students are thus asked to consider the learning skills requirements of the program. Encourages development of listening and speaking skills. May also encourage development of informal buddy system within the program.

JOURNAL ARTICLE ANALYSIS

Ask students to summarize and analyze journal articles in their field. Popular method of developing skills in using the library, identifying main ideas, and analyzing content related material.

LEARNING STYLES INVENTORY

Administer a learning styles inventory early in the term. Ask students to write about the results of the inventory, commenting particularly on connections between the findings and their perception of the learning they will be doing in the course. Helps students to identify their learning styles and potential problems they may face. Assists instructors to determine types of learners in the course and the students' perceptions about the course. May be used as catalyst for discussions about learning skills requirements for the course.

LECTURE NOTEBOOK

Periodically ask students to take notes in a special notebook which they will hand in. Hand back with comments, suggestions, and where appropriate referrals. Gives instructors a sense of students' notetaking competency. Instructors can copy examples of good notetaking for class to review and discuss. Students receive feedback on their own notetaking techniqes and can see how others take notes.

MAPPING AS A TEST ALTERNATIVE

After teaching mapping to a class, ask for a map which outlines the answer to a question on an exam or assignment as an alternative to an essay answer. Supplements teaching done in class.

PORTFOLIO WRITING

Ask students to write a variety of kinds of writing (ie. journals, essays, research reports, letters, etc.) for a "portfolio" which will be marked periodically during the term. Ask students to hand in drafts as well as final products. Encourages students to become more versatile writers and to view revision process as key. If designed well, may actually require less marking time than the traditional course with several standard essays. For more information on this approach, see Susan Beers' article, "Use of a Portfolio Writing Assignment in a Course On Developmental Psychology" in Teaching of Sociology (April, 1985).

STUDY GUIDES

Provide study guides for the first few chapters of the text. Later transfer responsibility for developing the study guides to the students. Assign marks for the study guides developed by the students. Encourages students to study more efficiently and to learn how to design good study materials for themselves.

STUDY HINTS

Ask students to find one hint per week that will help fellow students to study the course material more efficiently. Provide list of resources they can use to find hints. Ask that the hints be described on paper and that they also write a brief description of their personal experience with it. Copy the best hints (or all of them) for students to include in a study guide section of their notes. Encourages students to continue to develop study strategies throughout the term, rather than relying on the strategies that they have used in the past. Also can encourage them to find strategies that work especially well for a particular subject or course.

NOTE: If you have further integration ideas you would like to share, please contact the authors. They will try to include your ideas in the next revision of this handbook.

APPENDIX ONE

SUMMARY PAGES

AND

HANDOUTS

ON

LEARNING SKILLS

CONTENTS

a. Four Step Problem Solving Model

b. Key Words in Essay Questions

c. Learning Styles

d. Listening Skills

e. Notetaking Formats

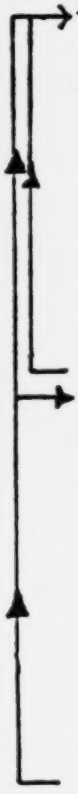
f. Preparation for Exams

g. Procrastination

h. SQ3R Textbook Reading Strategy

i. Time Management

FOUR STEP PROBLEM SOLVING MODEL



STEP ONE

Activity: AS ACCURATELY AND PRECISELY AS POSSIBLE, DESCRIBE THE NATURE OF THE PROBLEM. Explore feelings, thoughts, background information. Do not look for solutions.

Result: A clear insight into exactly what the problem is.
Rationale: No solution can be found unless you know what you are solving.

STEP TWO

Activity: CREATE AS MANY SOLUTIONS AS POSSIBLE. Use brainstorming techniques to generate ideas. Do NOT evaluate the solutions yet.

Result: A number of possible solutions to choose from.
Rationale: Encourages a longer and more creative list of solutions. Prevents the premature adoption of a poor solution.

STEP THREE

Activity: EXAMINE RELATIVE MERITS OF EACH SOLUTION. Do not make any decisions yet.

Result: Pros and cons of each possible solution are examined fully.
Rationale: Ensures a complete examination of solutions prior to decision-making. Prevents premature decision-making.

STEP FOUR

Activity: MAKE A DECISION based on the examination of solutions undertaken in Step Three.

Result: The best possible solution is chosen.

KEY WORDS IN ESSAY QUESTIONS

The following terms appear frequently in the phrasing of essay questions and determine the kind of answer required.

Compare — Show the significant similarities between two or more things, people, events, novels, etc. (Sometimes "compare" is used to mean "compare and contrast"; you must use your own judgment to determine whether you are expected to deal with similarities or with both similarities and differences.)

Contrast — Show the significant differences between two or more things, people, events, novels, etc.

Criticize — Express your judgement about the merit or truth of the object of criticism. Criticize does not mean judge harshly, or negatively: it means evaluate, showing strengths as well as weaknesses.

Define — Give a clear, concise and authoritative meaning. Don't give too much detail, but make sure to give the limits of the term. Show how the thing you are defining differs from other things in its class.

Describe — Recount, characterize, sketch, or relate in sequence or story form.

Discuss — Examine thoroughly all important aspects or qualities of the topic.

Enumerate — List; write and itemized series of concise statements.

Evaluate — Make a reasoned judgement on the subject.

Explain — Discuss the topic in detail, giving examples, illustrations, and reasons; show that you understand the idea or process or trend that you are explaining.

Illustrate — Use a diagram, figure, or concrete example to explain or clarify something. (eg. a principle, a problem, a system, etc.)

Justify — Defend; give reasons for decisions or conclusions, taking pains to be convincing.

Outline	Organize a description under main points and subordinate points; alternatively, outline may mean answer briefly, sticking to the most important points and omitting details, qualifications, etc.
Prove	Establish that something is true by citing factual evidence or giving clear logical reasons.
Relate	Show how things are related to, or connected with, each other or how one causes another, correlates with another, or is like another.
Review	Examine a subject critically, analyzing and commenting on it.
State	Present the main points in brief, clear sequence, usually omitting details, illustrations, or examples.
Summarize	Give the main points in condensed form, like the summary of a chapter, omitting details and illustrations.
Trace	Relate events in a sequence. These events are often stages in a process. (eg. the development of a foetal pig, the establishment of the League of Nations)

LEARNING STYLES

There are many ways of describing learning styles. David A. Kolb provides the following categories:

CONCRETE EXPERIENCE - People who prefer to learn through concrete experience learn from specific experiences. These learners tend to be open-minded and adaptable to change. They also rely on their feelings in learning situations.

REFLECTIVE OBSERVATION - People who prefer to learn through reflective observation like to learn by listening and watching. They prefer to observe carefully before making a judgement or decision.

ABSTRACT CONCEPTUALIZATION - People who prefer to learn through abstract conceptualization like to use logic, reasoning, and analysis to gain an intellectual understanding of the material. These learners rely on systematic planning and theoretical frameworks.

ACTIVE EXPERIMENTATION - People who prefer to learn by active experimentation like to learn by doing. These learners are practical and value learning which has results which are of use to people.

It is useful to reflect on your prefered learning style because:

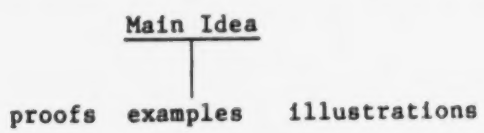
1. you can take advantage of your strengths and compensate for weaknesses.
2. you can identify learning styles you may want to work on improving so as to become more flexible.
3. you can identify how your learning style relates to the teaching style in each class.

LISTENING SKILLS

Hearing = becoming aware of sounds

Listening = making sense of the sounds you hear

L	LEAD	By previewing what you will be hearing (think about topic; review textbook)
I	IDEAS	Focus on main ideas first - then on supporting details



S	SIGNALS	Look for verbal and nonverbal signals Verbal: "First" "In conclusion" "Therefore" Nonverbal: use of board; when walking - when standing; raised and lowered voice
T	THINK	Concentrate on message work at listening and reflecting on what's being said
E	EMOTIONS	Keep emotions in check. Keep an open mind.
N	NOTES	Take notes (and then organize them) to assist with retention of what you heard

Listening involves managing distractions - from outisde the room, from the speaker, and from inside your head. Once you've learned to manage them, you will find concentration much easier.

Adapted from materials developed by Guelph University

NOTETAKING FORMATS

IN THE TEXTBOOK

1. HIGHLIGHTING — using highlighter pen (or underlining) to emphasize key parts of text

   what to highlight
   1. main idea statements
   2. imp. supporting details that clarify m. ideas

   ONLY ABOUT 10%

   Pros & Cons
   Pros - fast and useful for reviewing text
   Cons - passive & no evidence it helps to learn & remember

2. MARGINAL NOTES — notes made in margin of text

   what kind of notes
   1. summary statements (in own wds)
   2. notes to self (eg. *, imp., ?, !)

   Pros & Cons
   Pros - fast & useful for reviewing text
   Cons - fairly passive and doesn't help much with learning and remembering

RECORDING INFO ELSEWHERE

3. SUMMARY SHEET — system to org imp ideas & details

m. idea	details
term	definition
question	answer

   4 recommended features
   1. brief
   2. own wds
   3. use abbreviations
   4. ident to show relationships

   How to use
   Cover right column. Recite details, answers, definitions to match headings in left column. Check answers in right column.

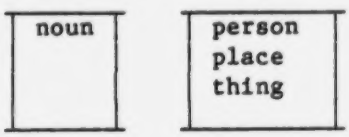
   Pros & Cons
   Pros - helps to learn while doing & when self-testing
   Cons - more time consuming

4. MAPPING — arrange info on page in diagrams/charts

Pros & Cons

Pros - processing info at high level -> ∴ learning material
Cons - time-consuming & not helpful for unrelated small details

5. FLASHCARDS — Index cards w question/term on one side & answer/definition on other



Pros & Cons

Pros - portable, flexible, learning through repeated self-testing
Cons - not useful for complex concepts & not useful if working with too many at a time

PREPARATION FOR EXAMS

WHEN DO I STUDY?

- review daily from the first day of classes: preferably review lecture notes/text notes within 12 hours.
- plan a major study schedule (beginning 2-3 weeks before exams).
- build variety into schedule (ie. avoid 8 hour sessions on one subject!)
- study in blocks of time (1 1/2 - 2 hours) with short breaks between. Set goals for each study block.
- within 24 hours of exam: do major review, but don't try to learn new information.

WHAT DO I STUDY FROM?

- course outlines
- textbooks (and notes from texts)
- lecture notes
- handouts
- previous exams

WHERE DO I STUDY?

- relatively quiet place -- free of distractions
- good lighting
- comfortable (but not cushy) chair
- necessary resources (books, pens, etc.) all together and immediately available
- same place for all study sessions if possible

EXAM WORKSHOP
PHYSICAL AND EMOTIONAL WELL-BEING

PHYSICAL

- Get enough sleep during exam period.
- Eat well.
- Don't abuse chemical substances (ie. caffeine, uppers, alcohol, etc.)
- Allow time to relax and wind down before bedtime.
- Get plenty of exercise.

EMOTIONAL

BEFORE THE EXAM:

- Build rest and relaxation into study schedule.
- Arrange pleasant event/reward to follow intensive study session.
- Test anxiety? Ask at Counselling Office for strategies to reduce it -- well before the exam period.
- If you're encountering difficulties in your life that are interfering with your learning, get help.
- Ensure that resources and clothes are ready well before you are to leave for the exam.

AT THE EXAM ROOM:

- Arrive at the exam room no more than 5-10 minutes early.
- Avoid discussing the exam immediately before it.
- Arrange seating to reduce distractions (preferably at the front of the room).
- Focus on what you know (not on what you don't know) while waiting.
- Take several calming deep breathes before reading your paper.

AT THE EXAM
COMMON SENSE TIPS

1. Listen carefully to verbal instructions at the exam. Ask questions if you are not sure about something.

2. Check that you have all pages of the exam. While checking, note the kinds and numbers of questions.

3. Write your name on all sheets/booklets to be handed in.

4. Make sure you have read and understood all general directions on the exam.

5. If you are using a computer-scored answer sheet, become familiar with the way the exam is set up and numbered.

6. Use all the time that has been allotted.

I. PREPARING FOR EXAMS

A. General Information

- Find out what information the test will cover (and what parts will be emphasized).
- Find out what types of questions will be on the test.
- Make sure to attend the last few lectures to pick up information on the test.
- For each course use the following hints:

1. Make a written summary of the entire course (to get the overall picture).

   - synthesize information from all sources (course outline, textbooks, lecture notes, etc.) (2-5 pages maximum)
   - organize summary -- cover main ideas/supporting details
   - 2 formats: mapping format
     outline format
   - point form, in your own words

2. Focus your studying.

   - identify most important/least important information in the course
   - identify the information you understand best/least
   - anticipate the questions that will be on the exam
   - allot your study time accordingly to these three factors

B. Hints for Objective Tests

- objective tests have specific, correct answers (eg. multiple choice, true/false, short answer)
- usually focus on more specific, factual information rather than opinions, etc.
- focus is on recognition or recall of information

1. Summary Sheets for each important topic/section of the course.

   - 2 columns ie. questions & answers / terms & definitions
   - use it as self-testing device

2. Flash Cards (can be designed throughout course)

   - good for specific information
   - definitions, formulas, diagrams, important terms and concepts
   - useful as a tool for memorization
   - recite the information, test yourself with them (read, think, speak)

3. Rewrite old quizzes, exams, assignments, problems.

   - practice
   - write, write, write

C. Hints for Essay Tests

- essay tests require longer, organized written answers
- focus on understanding of general themes
- focus on good organization and effective presentation of important, general themes, and supporting details

Use course summary (thinking/writing) and from it develop:

1. Study Sheets

   - for each section/general theme covered in course
   - for each anticipated question on exam
   - helps to organize thoughts and prepare for second half of study process:

2. Write Essays

   - practice writing answers to essay questions under time limits
   - outline answers; write paragraphs
   - work especially on introduction and conclusion

When writing notes, course summaries, study sheets, etc., never simply copy from one source to the page -- always use your own words.

II. WRITING EXAMS

A. General Information

1. Read through the entire exam quickly noting:

   - types and numbers of questions
   - distribution of marks
   - content of the exam

2. Jot notes to yourself of:

   - things you're afraid of forgetting
   - ideas/information jogged by questions on the exam

3. Before beginning the test, plan your time using the nature and number of the questions and distribution of marks as a guide.

   - always allow for some time at the end to review

B. Hints for Objective Tests

1. Read the instructions carefully - (check penalty for guessing, one or more than one answer, etc.)

2. Fill out the answer sheet properly. (Be especially careful with computer scored sheets.)

3. Start at the beginning and do the questions in order.

4. Don't spend too long on any one question.

   - if you're stuck or uncertain, mark the question in the test booklet and come back to it later.

5. For multiple choice tests:

   - try to predict the answer before looking at the alternatives.
   - read all alternatives.
   - use the process of elimination.
   - answer every question -- if you're unsure about the answer, eliminate those you can, and guess. (Use the hints for guessing, but only when you have to guess.)
   - change your answer if you feel you have good reason to.

C. Hints for Essay Tests

1. Read each question carefully; jot down ideas, notes to yourself so they come to mind.

2. Plan your time (take into account complexity, difficulty, marks, and your own knowledge of each question).

   - indicate start/finish times for each question

3. Select the questions you'll write on (if you have a choice).

4. Begin with an easy question.

5. Before writing, underline key content and direction words.

6. Outline your ideas first.

   - main ideas/supporting details

7. Make the introduction and conclusion powerful (and concise).

8. Write the answer -- double space (so you have room for revisions later, if necessary).

9. If you don't get finished, hand in your rough work (notes, outline, etc.).

   - expand your outline if possible

10. Allow time to review your answers -- make additions/revisions if necessary.

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PROCRASTINATION

Most frequently, we procrastinate because of INTERNAL FEARS.*

i Perfectionist fears failure

a. fears:

of mediocrity = failure)

of inadequacy (if it's difficult)

of need for others (should do it alone)

b. Imperfection = lower sense of self worth = discomfort. Therefore: Avoid discomfort by procrastinating.

ii Insecure fears success

a. fears:

of seeming competetive (not nice)

of unfair advantage (I don't deserve it)

of becoming workaholic (to maintain)

b. Success = uncomfortable consequences = discomfort. Therefore: Avoid discomfort by procrastinating.

iii Dependent fears independence

a. fears:

no more support from others

frightening responsibilities

rejecting established patterns in life

b. Independence = unpleasant results = discomfort. Therefore: Avoid discomfort by procrastination.

* There are many other reasons. For more information, see Procrastination by Burka and Yuen.

What to do about procrastination:

1. Identify those areas where you are most likely to procrastinate.

2. Assess consequences of procrastination

   Internal - worry, stress, anxiety, etc.

   External - Possibility of marks, friends angry, monetary fines, etc.

3. Make a commitment to reduce procrastination.

4. Set reasonable, acceptable long term goals.

5. Make reasonable weekly plans. Set goals and establish priorities for the week. Make similar plans for each day when necessary and helpful.

6. Break large projects down into smaller, manageable tasks.

7. If you have tried to deal with procrastination and failed, get help from the Learning Assistance Centre or Counselling Office.

YOUR AREAS OF PROCRASTINATION

COLLEGE

(eg. completing assignments on time, studying for tests, etc.)
My biggest problem areas:

Mild — Internal Consequences — Severe

Mild — External Consequences — Severe

HOME

(eg. yard maintenance, recreational times with family, etc.)
My biggest problem areas:

Mild — Internal Consequences — Severe

Mild — External Consequences — Severe

PERSONAL CARE

(eg. losing weight, making long-term life decisions, etc.)
My biggest problem areas:

Mild — Internal Consequences — Severe

Mild — External Consequences — Severe

FINANCES

(eg. filing tax returns, balancing checkbook, etc.)
My biggest problem areas:

Mild — Internal Consequences — Severe

Mild — External Consequences — Severe

SOCIAL RELATIONSHIPS

(eg. personal correspondence, confronting someone about a problem, etc.)
My biggest problem areas:

Mild — Internal Consequences — Severe

Mild — External Consequences — Severe

SQ3R TEXTBOOK READING STRATEGY

WHAT	WHY
SURVEY - Preview the reading by: 1. reading intro & summary 2. reviewing objectives at beginning and questions at end 3. glancing at headings subheadings 4. glancing at pictures, graphs, charts, diagrams, etc. 5. determining how material is organized. Then: Decide how you will attack the reading.	- helps build reader's focus, concentration, and motivation - clarifies the reading task - establishes text structure
QUESTION - During or after survey stage, ask questions (in head or on paper) that need to be answered. (Turn headings, terminology, lists, etc. into questions.)	- continues to build reader's focus, concentration, motivation - begins to help reader comprehend material
READ - Read actively to answer questions. Take notes during or immediately after reading. Look for supporting details that clarify main ideas identified during survey.	- comprehension is first step to retention of material - active approach encourages concentration, focus
RECITE - During or immediately after reading stage, cover material (or notes) and attempt to recite in own words what was covered. If you can't, review material and then recite again.	- ensures comprehension has taken place - begins to build retention
REVIEW - Review notes and/or book within 24-48 hours and then weekly and/or biweekly. Review main points and areas of difficulty. Recite important points again.	- regular review ensures retention of material. No review may result in loss of 80% or more of material read.

SQ3R

The SQ3R study method, developed in the 1940s by Francis Robinson, is a widely used system for effective study. The five steps are: survey, question, read, recite, and review. The steps are outlined below. One may wish to study these and the accompanying study map which summarizes the steps.

Step One - Survey:

The survey step helps one get started reading difficult material. It is an effective means for organizing one's reading of complex text material in such a way that retention will be enhanced. In fact, if one surveys and questions (see Step Two) carefully, one can become acquainted with between 25% and 40% of the content in typical texts.

To survey, one reads in a highly selective manner. First read the learning objectives and chapter outline (if these are present) at the beginning of the chapter. Then flip to the end of the chapter and read the summary. Often the summary consists of the eight or ten main points in the chapter. Other times, there will be a paragraph summary and/or review questions. Once familiarity with the main information is attained, one can move to the next step.

Step Two - Question:

The question step helps the reader focus attention on the content. The headings throughout the chapter become the major resource during this step. The reader may observe the types of bold-face headings to understand the structure of the content. Knowing the inter-relationships of the major section headings and the sub-headings will help the reader quickly grasp content relationships. One can often create questions by turning the word order of sub-headings around and adding "who, what, when, where, why, or how." Having a question in mind aids concentration. As answers for these key questions are found, the reader becomes actively engaged in discovering meaning.

Step Three - Reading:

Thus, surveying and questioning lay the groundwork for enjoyable, profitable reading. It may be useful to point out that the question step does not have to be carried out from the beginning of the chapter to the end before reading. Often, it is desirable to ask questions for one or two sub-sections, and then read.

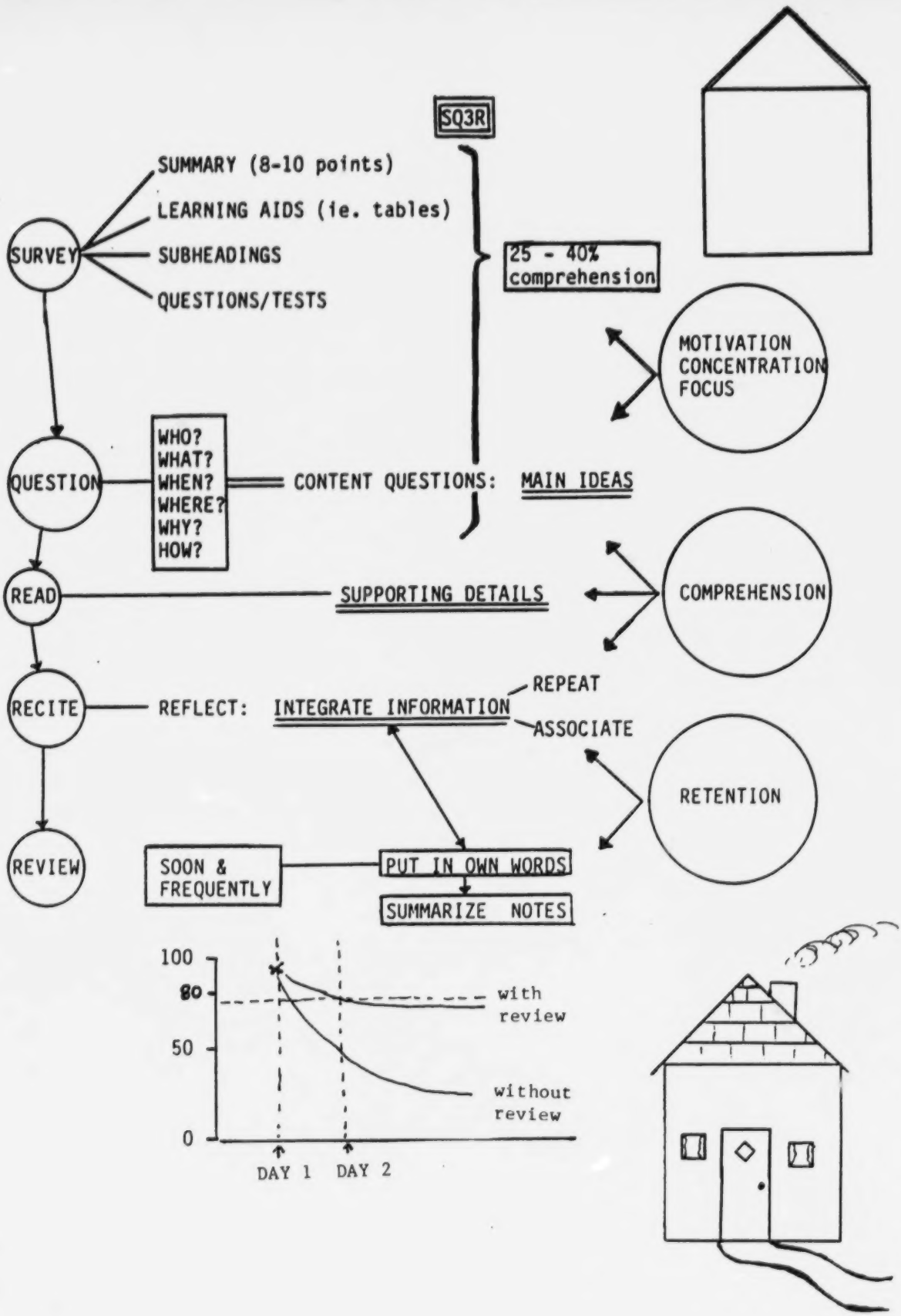
Step Four - Reciting:

Like questioning and reading, reciting need not be carried on in a linear, ordered way. Rather, the reader may wish to read a section, and then recite. Recite does not refer to rote memorization. Rather reciting suggests recalling and reflecting. The technique often used is to summarize after reading each sub-section. Ability to put the content in one's own words "proves" comprehension and ensures improved retention. Summary points can be written in the margins. Mapping of material (diagramatic representations of key words and ideas) is a quick and effective way to accomplish the recite step. Often the margins in a text or other white space provide sufficient room for creating maps.

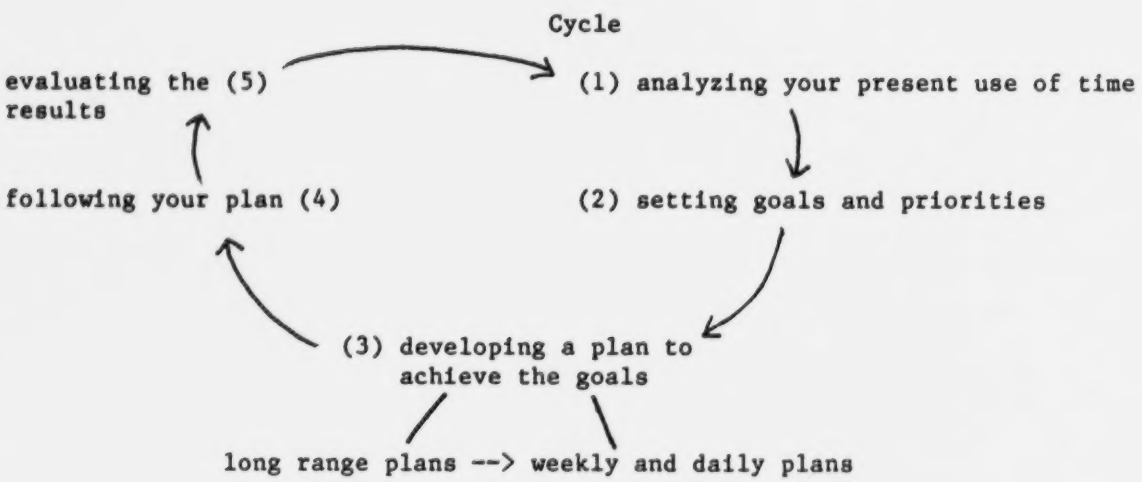
Step Five - Reviewing:

The final step in the reading process, reviewing, is the one most frequently neglected. However, it is of critical importance, because forgetting begins immediately and causes poor retention. One should begin to review soon after initial reading, and then review frequently until the content becomes "second nature." Reviewing does not mean re-reading. Using one's knowledge of the structure of the material (learned in earlier steps) one can fairly quickly re-acquaint oneself with the content.

These five steps, executed with diligence, can lead to a more satisfying experience in reading. While SQ3R does not remove the effort, this model can be used by everyone to make the effort of reading really enjoyable.


SQ3R
SUMMARY (8-10 points)
LEARNING AIDS (ie. tables)
SUBHEADINGS
QUESTIONS/TESTS
SURVEY
25 - 40% comprehension
MOTIVATION
CONCENTRATION
FOCUS
QUESTION
WHO?
WHAT?
WHEN?
WHERE?
WHY?
HOW?
CONTENT QUESTIONS: MAIN IDEAS
READ
SUPPORTING DETAILS
COMPREHENSION
RECITE
REFLECT:
INTEGRATE INFORMATION
REPEAT
ASSOCIATE
RETENTION
REVIEW
SOON & FREQUENTLY
PUT IN OWN WORDS
SUMMARIZE NOTES
100
80
50
0
with review
without review
DAY 1
DAY 2

TIME MANAGEMENT


Cycle
(1) analyzing your present use of time
(2) setting goals and priorities
(3) developing a plan to achieve the goals
long range plans --> weekly and daily plans
following your plan (4)
evaluating the (5) results

(1) Keep a log for a week and determine where your times goes.

(2) Models for setting priorities:

Must	A	Important and Urgent
Should	B	Important but Not Urgent
Should	C	Unimportant but Urgent
		Unimportant and Not Urgent

(3) Long range plans - identify due dates, etc. for whole term
- review the next month to determine workload
Weekly plans - identify goals for the week and set priorities
Daily plans - identify what you want to achieve today and when

(4) Do what you said you would do!

(5) Evaluate - using time management journal (see next page) or some other variation and then adjust planning to reflect results of your evaluation.

APPENDIX TWO

LEARNING SKILLS AND ALTERNATE DELIVERY

LEARNING SKILLS AND ALTERNATE DELIVERY

When instructors use alternate delivery methods, they can be disappointed in the results -- despite the fact that the methods themselves are educationally sound and the materials appropriate. Sometimes the problem is the level of the students' learning skills. Below you will find listed some of the alternate delivery methods and the corresponding learning skills that students need in order to succeed. Students do not necessarily have to possess all the skills before entering the course. At least some attention to these learning skills at the beginning of the course, however, may reduce subsequent problems.

Competency Based Education (CBE) and Self-Instructional Modules

Attitudes: Motivation, confidence, and other attitudes that will vary depending on the program are important. They contribute to the students' abilities to stay on track and persist in the program.

Learning styles: If the students are given a choice of the types of resources from which they can learn, they should be aware of how they learn best. For example, an auditory learner would be well-advised to choose audio tapes whenever possible. A student who learns best from concrete experience should try (if possible) to arrange to study theory portions of the course after the experiential sections.

Metacognition: Greater responsibility for their own learning requires that students be able to monitor their learning and make adjustments if they are encountering difficulties.

Reading, listening, and viewing: Students will need these skills in order to learn from the resources provided. A deficit in reading can be particularly harmful to student success and confidence.

Retention and Memorization: If there is a significant theory portion, the students should know what they need to do to retain the information. If in the past they have depended on classroom activities to consolidate their learning, they may find themselves in difficulty if they do not have many large class activities. They must be shown how to memorize and learn.

Time management: Managing time is crucial to the students if they are to stay on schedule -- even if that schedule is designed by the instructor.

Writing Exams: If format of the exams is unusual, they may need help initially in learning how to prepare for and write the exams.

Computer Assisted Instruction (CAI)

Attitudes: The "absence of technophobia" has been identified as an attitude which is key to students' confidence and comfort with using computers.

Keyboarding: If the students do not have adequate keyboarding skills, they may find CAI frustrating. There are many keyboarding software packages that have been designed to help students become more proficient.

Computer Assisted Instruction (CAI) -- continued

Thinking: Depending on the software being used, the ability to conceptualize may be a useful skill. This is particularly important when the students are first learning how the computer works. While they do not need to be programmers, they will learn more quickly and easily if they can think at an abstract level.

Time Management: If the students are responsible for working through the computer portion of the course on their own, they will need to manage their time well. Even if the schedule is posted by the instructor, the student may struggle with procrastination.

Computer Managed Learning (CML)

Keyboarding: Depending on the program, the students may find it easier to work within a CML program if they have adequate keyboarding skills.

Time Management: Because the students may be given more responsibility for their own learning and scheduling in a CML program, they need to have good time management skills.

Teleconferencing

Attitudes: Motivation, perseverence, and self-discipline have frequently been identified as key to success in this type of delivery.

Concentration: Students spend a great deal of time listening in a teleconferenced course. Their concentration levels must therefore be consistently high.

Library Skills: Because many of the students are off-campus, they must know how to find library resources. Although they usually have access to an on-campus library professional, they will find the course easier if they know how to use the resources without assistance.

Listening: Listening skills are crucial to teleconferenced courses -- particularly as students cannot use non-verbal cues to assist in interpreting the speaker's message and must focus on the words alone.

Reading: Print materials are often used in teleconferenced courses to help the student prepare for and/or reflect on the work done in class. Reading skills may therefore be of great importance both to the students' understanding of the course and to the smooth running of the class.

Speaking: Participation is an important component of teleconferenced courses. Speaking into a microphone without benefit of eye contact with listeners can be a difficult challenge for some of the students. Comfort in speaking is therefore a real asset.

NOTE: This list has been developed based on interviews with instructors who have used the alternate delivery methods listed. It is by no means exhaustive. Delivery methods most often used at Red Deer College were chosen. Suggestions for additions to the list would be gratefully received by the authors.

APPENDIX THREE

A CASE STUDY:

THE INTEGRATION OF LEARNING SKILLS INTO EDUCATION FOUNDATIONS 201

The Course

The one-semester course was a Red Deer College University Transfer course: Educational Foundations 201. There were 30 students enrolled. Students are encouraged to take the course during the first year of their program.

This course has been designed to impart an understanding of the nature of Canadian education as it has developed over the past 200 years. In addition, students are given the opportunity of building on and employing this understanding in analyzing the role of schooling in contemporary society. A brief description of the course and its general objectives can be found in Appendix A.

The Learning Skills Objectives

The following objectives were decided upon in consultation with the Department Head of the Red Deer College Learning Assistance Centre.

Upon completion of the course, students are to have learned three broad skills. They are listed below.

1. Employ appropriate learning strategies to read critically.

   Strategies included are the:

   a) employment of the SQ3R;
   b) identification of the main ideas and details;
   c) drawing of reasonable inferences (including interpretations, predictions and conclusions);
   d) identification of techniques used to present information;
   e) relation of information presented to previous knowledge;
   f) analysis of information presented in the course to determine its relative importance and its relationship to other course information;
   g) monitoring of the effectiveness of strategies being used to ensure comprehension and analysis are occurring

2. Employ appropriate learning strategies when preparing for and taking exams.

   Strategies included are the:

   a) identification of material that exams will encompass;
   b) identification of themes and patterns in course material;
   c) employment of active learning strategies when studying and memorizing;
   d) reading of tests critically and carefully to determine the task that must be accomplished;
   e) monitoring of the effectiveness of test preparation and test-taking strategies

3. Communicate ideas effectively when writing.

   Tasks included are the:

   a) determination of the purpose for writing;
   b) analysis of the writing task to determine its relationships to the entire course
   c) development of a plan for developing ideas;
   d) monitoring of the effectiveness of writing.

The Process

A Brainstorming Session

Through a series of brainstorming exercises (individual, small-group, pairs, large-group) during the second and third days of the course, the students identified the learning skills that they believed most important. As little guidance as possible was provided so that the students would realize that they, not the instructor, considered these skills important. However, the rationale for teaching learning skills throughout the course was explained; as was the concept of metacomprehension. The students were encouraged to make notes on flip-chart pages in any manner they desired. The learning skills emerged clustered in three categories -- thinking, studying and attitudinal. Three lists done by pairs of students are contained in Appendix B. These lists illustrate the types of learning skills that the class believed to be important. As well, the lists demonstrate some interesting thinking process used while note taking. The lists demonstrate that individual students are quite comfortable note taking in remarkably diverse ways if given the opportunity. Although cued by the Learning Assistance Centre Department Head the diversity was still a revelation for the instructor. Individuals obviously learn differently and there is no correct method of studying. The entire session was considered a positive learning experience by the class. Therefore this exercise would be conducted again by the instructor and different styles of note taking such as mapping and the split-page method would be encouraged.

Reinforcement and Extension

Prior to the writing of the mid-term examination, the lists of important learning skills developed by the students, in pairs, were distributed to all class members. A discussion was then led by the instructor. Commonalities between lists were identified as were skills that were missing. It was agreed that the students' lists were primarily "wish lists", that is 'what ought to be' not 'what is'. The lists contained skills that for the most part were within the affective domain, not the cognitive domain. As well most of the identified skills were considered passive not active. In order to illustrate the skills not identified, metacomprehension work by Long (1985) was utilized. Her categories for classifying studying strategies (These categories are

contained in Appendix C) were presented. The importance of such study strategies as paraphrasing, relating to personal experience and summarizing was stressed. As well, the importance of interactive strategies as well as passive strategies was stressed.

The Introduction of Specific Learning Skills

During the second week an entire class was devoted to the teaching of certain learning strategies. These strategies were related to the first major reading assignment of the course -- an article by Harris (1981). The SQ3R (survey, question, read, recite, review) method was presented. The concept of levels of reading (main ideas, detail, inference, evaluation and application) was taught. Finally, note taking techniques, such as highlighting, making marginal notes, mapping, the split-page approach and flash cards were introduced. As an assignment, the class was asked to utilize these note taking procedures while studying Harris's article. They were also instructed to identify his main idea and his supporting ideas, look for inferences and to evaluate the article. Several handouts from the Learning Assistance Center related to studying were also distributed and discussed.

The following class was devoted to the substance of Harris's article "The emotional structure of Canadian regionalism". Of equal importance, it was possible to reinforce the learning strategies and to review them.

Further Learning Skills

During the fourth week of the course, class time was devoted to the discussion of strategies helpful in preparing for and writing the first of two assigned papers. At this time, the class was taught to identify content and direction statements that are found, not only in the assigned question for the paper, but in examination questions. As well, a list of "key words in essay questions" was distributed and discussed. Two weeks later these and other previously discussed strategies were reviewed when the graded papers were returned and discussed. An entire class was devoted to a discussion of the substance of the paper.

Learning Skills Reviewed

At the end of the seventh week of the course the mid-term examination was returned. This provided an excellent opportunity to relate the process approach of the course learning skills component to the substantive course content. Therefore a full class was scheduled to discuss the results of the essay examination. The examination had been written only two days previously, so the content and study strategies utilized were still fresh in the students' minds.

Again the identification of content and direction statements was stressed -- as was the use of interactive versus passive study strategies. The instructor pointed out that regardless of each individual's grade, there could have been an improvement if more strategies had been utilized and if the key statements

in the questions had been better identified. The relating of diverse activities and experiences to the task (in this case an essay examination) was stressed. The students were told to prepare for the examination by asking themselves "Why?" (For example, "Why am I asked to read this particular article?") Furthermore the instructor suggested that links should be identified. They were asked to identify connections between class lectures and discussions, personal experience, learning from other courses and assigned readings. These links or connections it was suggested should continuously be linked to the task. This approach to learning, which is really an approach to thinking and understanding, is illustrated in figure 1. The conception, originally developed during the pilot project, is a refined version.

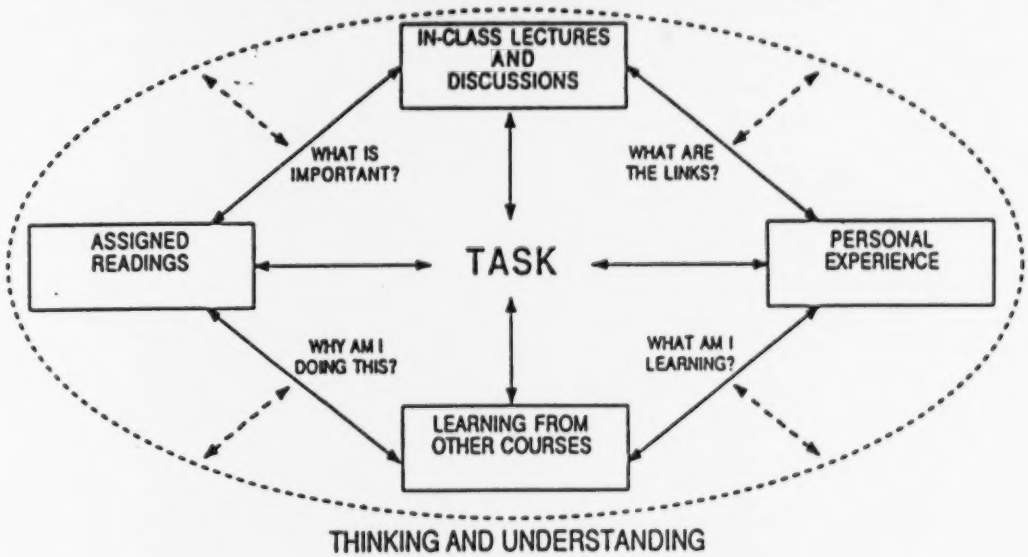


FIGURE 1
AN APPROACH TO LEARNING

The Reinforcement of Learning Skills

The mid-term examination was the last time that a significant amount of class time was necessary to devote to learning skills. During the final six weeks students were reminded of the various learning techniques at appropriate moments, such as at the beginning of a unit or prior to any assignments, but nothing new was introduced.

When the second position paper was graded and returned the class, grade point average was two points (a nine point scale is used at Red Deer College) higher than on the first position paper. This grade increase, coupled with student feedback, provided evidence that the students were becoming more comfortable utilizing the learning skills that they had been taught. The class had been alerted at the outset of the course to the fact that they would find these strategies time consuming at first, but with time, if they continued to practice the suggested strategies, the time commitment would decrease and their studying would result in greater learning. This appeared to happen. A 1.5 increase in the class grade point average from the mid-term to the final examination is another possible indication that the teaching of and subsequent utilization of systematic learning skills resulted in increased learning of the substantive content of Educational Foundations 201.

No student's grades dropped during the fourteen weeks of the course. This seemed to provide the necessary reinforcement for the students to utilize the study skills that they were introduced to during the early segments of the course.

Further evidence that the integration of learning skills within the normal content of a course is a worthwhile endeavour was provided on the second last day of the course. On that day, the class was debriefed. The reasons for an integrated learning approach were expanded and clarified in depth. The learning skills were reviewed. The entire approach was discussed. Finally, students filled out an evaluation of the Learning Skills component. Twenty-three students responded.

Evaluation

The detailed objectives of the learning skills approach were stated at the outset of this paper. This detail was never presented to the students. Based on an observed improvement in student writing and communication skills and on informal feed-back, the instructor believes that the students learned more than they would have if learning skills had not been formally presented. The learning skills objectives were achieved.

Based on analysis of the responses to the questionnaire written by the students it would appear that the students also believe that the approach was worthwhile and should be continued. Their responses also indicate that the objectives were met. Table I contains the six questions asked and a summary of the responses. Most questions asked for examples or further comments. To the question "Are you reading and taking notes differently?" 82.6% responded in the affirmative. Sample comments were: "Reading with and for more understanding, highlighting less, marginal notes." "Yes, when reading I use marginal notes." "Yes, looking for details, highlighting, questioning myself."

To the question "Are you preparing for and/or writing exams differently?" 60.9% said yes. Sample positive comments include: "Hope so but sometimes I wonder. I'm trying to anticipate questions and link things together which are important." "Yes, i.e. - active studying - don't just re-read, I write down things and recite to myself." "On some subjects, yes. I'm spending more time rehearsing the steps I'll likely take in completing the exam."

To the question "Are you able to better communicate your ideas when writing?" 81.8% responded positively. Representative examples were: "Yes. I've learned to get right to the point of things and have solid support for it." "Yes, more important facts from the reading are put into the essay." "Yes, better able to organize my thoughts due to better notetaking and preparation."

To the final question "Should an emphasis on learning Skills be included in this course again?" 87% said yes. One response serves as an excellent summary of the entire process and suggests that the approach should be utilized in further courses. The response was as follows: "I think it does have a use. At first I thought it was a waste of time, but now I find that various learning skills come into my head while actually doing a paper or exam and they sometimes help."

TABLE I

STUDENT EVALUATIONS OF EDUCATION FOUNDATION 201 INNOVATIVE PROJECT, WINTER, 1988

As a result of the emphasis on Learning Skills:

1. Are you reading and taking notes differently?

Yes - 19	No - 4
82.6%	17.4%

2. Are you preparing for and/or writing exams differently?

Yes - 14	No - 9
60.9%	39.1%

3. Are you able to better communicate your ideas when writing?

Yes - 18	Maybe - 1	No - 3
81.8%	4.5%	13.6%

Students perceive changes in	no area	0	0%
	1 area	4	17.4%
	2 areas	11	47.8%
	all 3 areas	8	34.8%

4. What did you like best about this approach?

gradual introduction of skills over time	7	31.8%
perceived improvement in learning/studying	6	27.3%
helped with content and tasks of course	6	27.3%
group work	2	9.1%
organization and structure	1	4.5%

5. What did you like least about this approach?

amount of information/hard to put into practice	4	26.7%
too spread out	3	20 %
inappropriate to level/didn't use much	3	20 %
the lecture on learning skills	2	13.3%
unsure	2	13.3%
repetetive/boring	1	6.7%

6. Should an emphasis on Learning Skills be included in this course again?

Yes - 20	Yes & No - 1	No - 2
87%	4.3%	8.7%

Sample Comments for question six:

"Yes, because it can apply both to Ed. Fdn. and all of your other courses."

"Definitely - the course is logically suited to handle this type of double curriculum ..."

"Yes. It helped me. It taught me how to read. Before it would take me hours to read a chapter because I was scared of missing information."

"No ... I don't feel it is appropriate to teach this at a college level. Most students have a system in place by now."

"Yes, there are a lot of people that have poor learning skills and [this] thing could really help them to improve."

"I think it does have a use. At first I thought it was a waste of time, but I now find that various learning skills come into my head while actually doing a paper or exam and they sometimes help."

A Monitoring Process

Canadian studies is a major component of one of the six basic units of Educational Foundations 201. Three articles derived from a research project that the instructor had been involved in were therefore utilized as instrumental content for the topic and as a vehicle to (in a general way) monitor the students' development of learning skills.

One article was distributed during the first week; one was distributed after eight weeks and one was distributed after thirteen weeks. Each article increased in length and complexity. After the third article was studied the topic was discussed in class.

As each article was read the students were requested to answer three questions in writing and return them. The questions accompanying the first article were as follows:

1. After you have read the Introduction, stop reading and answer the following question: How are you reading and preparing for an examination question or for a class discussion?

2. After you have read the Complete Article again, answer the question: How have you read and prepared for an examination question or for a class discussion?

3. Concluding Exercise: Write one question you think suitable for a class discussion or for an essay examination. The question should require critical thinking.

The questions accompanying the remaining articles were almost identical to the first set of questions.

The responses to these questions articles proved impossible to analyze objectively. However, students provided more detailed responses to the questions as they progressed from article to article. They also seemed to indicate that more interactive strategies were being utilized by the time the third article was read. Of great importance was the fact that the students understood the topic well when it was finally discussed during two classes at the conclusion of the term. Although no adequate analysis proved possible the instructor would present the same questions another time when the articles are studied. The questions did enable the monitoring of the development of reading comprehension strategies.

A Final Point

In conclusion one final point should be stressed. The integration of learning skills into Educational Foundations 201 necessitated detailed planning prior to the teaching of the course. The planning was worthwhile. Because of this planning, none of the traditional content of the course had to be deleted. The presentations were clarified and modified which likely improved the entire course. The students received all of the traditional content of a university transfer course as well as learning study skills which improved their performance in Educational Foundations 201 and quite probably in their entire program.

References

Harris, C. The emotional structure of Canadian regionalism. In the Walter L. Gordon Lecture Series, Vol. 5, The challenges of Canada's regional diversity. Toronto: Omnigraphics Inc., 1981.

Long, E.W. The effects of metacomprehension cuing on college student achievement. Unpublished doctoral dissertation, The University of Tennessee, Knoxville, 1985.

APPENDIX A

Educational Foundations 201
Course Description

Educational Foundation 201

COURSE DESCRIPTION

Canadian educational arrangements are characterized by complexity and diversity. This suggests that they have evolved as a consequence of the interaction of a variety of historical forces. Nonetheless, they appear to be eminently suited to the social, political and cultural milieu of Canada.

This course is designed to impart an understanding of the nature of Canadian educaTIon as it has developed over the past 200 years. In addition, students shall have the opportunity of building on and employing this understanding in analyzing the role of schooling in contemporary society.

OBJECTIVES

The general objectives of the course are:

1. to introduce students to a systematic process of analyzing the relationship between education, schooling, society and geography;

2. to acquaint students with the historical and geographical diversity of Canadian education by applying this method of analysis to three regions of the country at various stages of their development;

3. to apply knowledge and understanding gained from these analyses to a consideration of the character and contemporary Canadian society and the role of education within it; and

4. to provide opportunities for students to develop and demonstrate competence and facility in both written and oral form in analyzing and presenting in a disciplined and objective manner ideas and arguments concerning educational issues and problems.

In the opinion of the instructor the ability to practice critical analysis is an intended learning outcome of equal importance to the conceptualization of substantive content. Class discussion, class assignment, assigned papers and examinations will reflect this opinion.

APPENDIX B

Sample Learning Skills Identified By Students

SHEET #3

ATTITUDE

1. motivation
2. interest
3. discipline
4. goal setting
5. confidence
6. open-mindedness
7. positive attitude

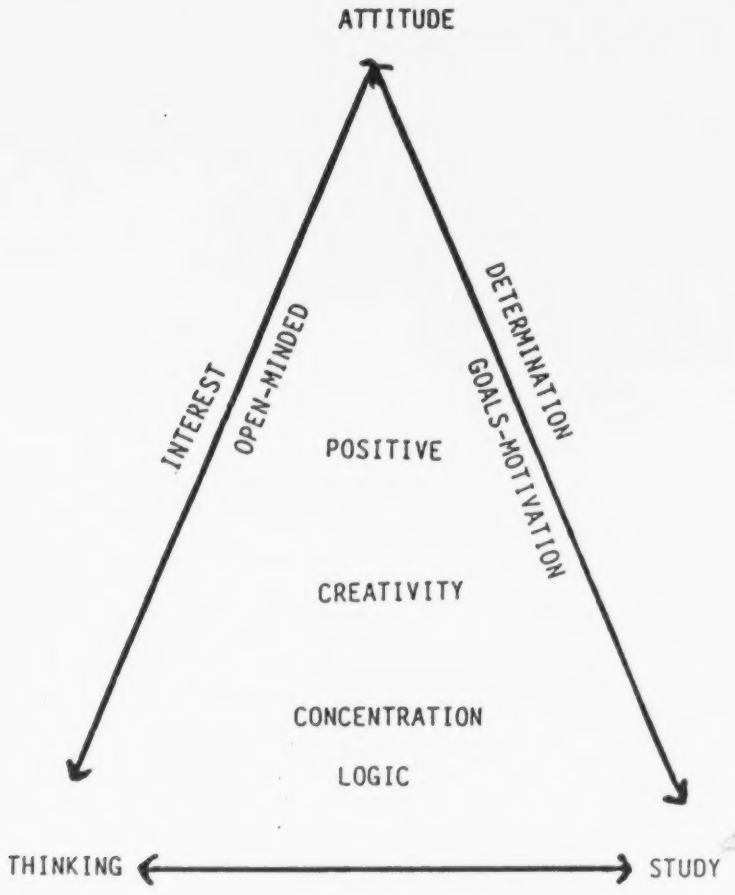
STUDYING

1. proper environment
2. time management
3. organization
4. appropriate study method (ie: SQ3R)
5. keeping up on work
6. concentration
7. reading for content

THINKING

1. organization of thoughts
2. being able to think abstractly
3. analysis or synthesis
4. mnemonics
5. concentration
6. clarity of thoughts
7. recall

SHEET #10


ATTITUDE
INTEREST
OPEN-MINDED
DETERMINATION
GOALS-MOTIVATION
POSITIVE
CREATIVITY
CONCENTRATION
LOGIC
THINKING
STUDY
ORGANIZATION

SHEET #11

ATTITUDES
Motivation
interest
disposition
commitment
confidence
Willingness
co-operation
Determination
dedication
Confidence
hope
positive attitude
patience
"stick-to-it" attitude

STUDYING
Memorization
notes
cue cards
Notes
Main points
Good Health
sleep
nutrition
Environment
Set Schedule

THINKING
good notes
Organization
Communication
meditation
Memorization
Creativity
positive
originality
reflectiveness
imagination
Understanding
analysis
repetition
alert
Concentration
recall
word association
persuasion

APPENDIX C

Categories For Classifying Study Strategies'

'As conceptualized by E.W. Long in The effects of metacomprehension using on college student achievement. Unpublished doctoral dissertation, The University of Tennessee, Knoxville, 1985.'

CATEGORIES FOR CLASSIFYING STUDY STRATEGIES

INTERACTIVE STRATEGIES

Anticipating the Test

Strategies to be included in this category are those that suggest the student is trying to anticipate what might be on the exam. Examples would be comments such as "I pose questions for myself about the material," and "I try to guess what might be on the exam."

Paraphrasing

Paraphrasing involves efforts to derive an understanding of material in one's own words rather than in the words of the author. "I made certain I could restate definitions in my own words," and "I tried to put information in my own words." NOTE: Any reference to writing out ideas in own words should be classified as notetaking.

Relating to Personal Experience

Included in this category are those strategies that indicate efforts to be personally involved with the material. Examples would be: comparing what is written to personal experiences; putting one-self into the examples; relating information to one's childhood, adulthood.

Integrating/Grouping

Integrating or grouping involves the uniting of ideas into a whole or in some way trying to link ideas together in order to achieve better understanding. Examples would be statements that refer to fitting ideas together, comparing different sections with one another, and seeing how ideas are logically related.

Summarizing

Summarizing involves student efforts to reduce ideas in a given section (e.g. under a single heading) or sections into a more concise statement. References to making a summary of ideas in a passage or putting ideas in more concise form would be examples. NOTE: Saying that ideas are put in one's own words would be classified as paraphrasing, whereas indicating that sections were rephrased or shortened would be summarizing.

Taking Notes

Any reference to writing out ideas would be included in notetaking. Jotting down, listing, outlining, and writing would be examples.

Visualizing

Any statements regarding the use of visual images are a part of this category. An example would be trying to form mental images from examples in the handout.

PASSIVE STRATEGIES

Skimming

Skimming involves quickly previewing material before reading it in more detail. Comments about examining headings, topic sentences, length of the assigned reading, summaries, looking for the gist of the material, attending to italicized words and the like before reading would be examples.

Adjusting Speed

Adjusting speed has reference to changing reading speeds in accordance with the difficult or ease of the material. Statements about reading carefully, slowing down to understand, trying to comprehend by careful reading and similar statements are part of the adjusting speed category.

Rereading

Rereading includes any selective rereading of material. Examples are rereading main ideas, underlined or highlighted material, notes, and the like.

Underlining

Highlighting important points, placing stars or asterisks by important ideas, underlining of words are included in the underlining category.

Memorizing

Any reported effort to commit material to memory are part of this category. Examples are the use of neumonics, mentally repeating ideas, and going "over and over" the material.

Questionable

Any comment that cannot be understood because it is illegible or unclearly stated is to be placed in this category.

<BA/31>

APPENDIX FOUR

AN ANNOTATED BIBLIOGRAPHY OF BOOKS, AUDIO VISUAL MATERIALS, AND ARTICLES

AVAILABLE IN RED DEER COLLEGE'S

LEARNING RESOURCES CENTRE AND LEARNING ASSISTANCE CENTRE

COMPILED BY: PAUL BOULTBEE
GLYNIS WILSON BOULTBEE

ANNOTATED BY: ROBERT ANDERSON

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INTRODUCTION

This bibliography of learning skills resources (mostly published since 1980) lists useful books, audio visual materials, and articles which are available in Red Deer College's Learning Resources Centre and Learning Assistance Centre. The materials have been organized as follows:

Study Skills

lists the most general resources on learning and study skills.

Exam Preparation

lists resources on both preparing for and writing exams.

Mapping

lists resources relating to mapping - a technique that students can use to take notes, study, and organize information before writing.

Metacognition

lists general resources on the relatively new field of metacognition.

Notetaking

lists resources on notetaking from textbooks and lectures, as well as notetaking in preparation for essay writing.

Reading, Writing, and Thinking Across the Curriculum

lists resources written by proponents fo the "Across the Curriculum" movement. The majority of the resources relate to writing because it is the strongest element of the movement.

Time Management and Procrastination

lists resources helpful when dealing with these organizational problems.

The books and audio visual materials are annotated. If you are interested in reviewing any of the articles listed, go to the Learning Assistance Centre first. Binders on each topic include summaries or comments on the articles and, if they were deemed particularly useful, the articles themselves. In this bibliography, two asterisks at the beginning of the entry indicates that the article is on file in one of the Learning Assistance Centre binders. One asterisk indicates that a portion of the article is on file.

STUDY SKILLS

Books in the LRC and/or the LAC:

Algier, A.S. and Algier, K.W. (eds.) Improving reading and study skills. Jossey-Bass, 1982. 99p. (LB 2361.5.N4 no. 8)

This book is highly recommended because it is written for a college or university instructor. The excellent final chapter (#9) is representative of the entire book. The chapter, entitled "Study skills and students of the eighties", addresses three questions: Who are the students of the eighties? What study skill do they need? What are some issues related to study skills and students of the eighties? The answers to these questions should force any instructor to think deeply.

Atkinson, R. and Longman, D. Reading enhancement and development. West, 1985. 479p. (LAC LB 2395.A78 1985)

This book is designed to be a text for a college reading course. There are sixteen chapters -- all with student exercises and all with objectives listed. The SQ3R reading system has been used to structure the chapters. Incorporated into the book are recent reading theories such as metacognition, schema theory, and the reading-writing connection. This book should be a useful reference.

Bell, B.C. Tools in the learning trade: a guide to eight indispensable tools for college students. Scarecrow Press, 1984. 179p. (Z 711.B43 1984)

The book reviews eight tools for learning: dictionaries, writing guides, one-volume general encyclopedias, research guides, style manuals, calculators and computers, and handbooks for creating thinking. Within each heading are suggested references with comments. The author ranks his suggestions and and explains his rankings.

Cohen, E.L. and Poppino, M.A. Discovering college reading, thinking, and study skills: a Piagetian approach. Holt, Rinehart and Winston, 1982. 234p. (LAC LB 1049.C57 1982 and LB 1049.C57 1982)

This is an excellent book designed for an adult learner. Readers are taught how to read, think, and study in an in-depth manner. Much theory is presented, but it is presented in an interesting way. The content is sequenced and there are exercises for the reader to complete in every chapter. The authors use a four-step format to facilitate learning: exploration, invention, application, and recapitulation.

Davis, A. and Clark, E.G. T-notes and other study skills. 2nd ed. Davis and Clark Publishing Co.,1986. 76p. (LB 1049.D38 1986)

An excellent, brief booklet that should be very useful to any college student. The authors' system of notetaking -- T-notes -- is clearly presented and seems to be a feasible format. Seven other skills are then discussed. Sample skills are: textbook chapter subtitle mapping; ten keys to chapter information; taking essay examinations; and thesis writing: the S-A-D pattern. The authors point out that each of the skills or techniques described have four outstanding qualities: a simple plan, flexibility, closure, and utility.

Ellis, D.B. Becoming a master student: tools, techniques, hints, ideas, illustrations, instructions, examples, methods, procedures, processes, skills, resources, and suggestions for success. 5th ed. College Survival, 1985. 344p. (LAC LB 2343.3.E44 1985 and LB 2343.3.E44 1985)

This is a student workbook. If a student in difficulty could read only one book seriously, this would be recommended. It contains tools, techniques, hints, ideas, instructions, examples, methods, resources, and suggestions for success. The format is attractive, the style highly readable, and yet much detail is provided.

Gilbart, H.W. Pathways: a guide to reading and study skills. Houghton Mifflin, 1982. 381p. (LB 2395.G47 1982)

The intent of this book is to show students how to build their reading and study skills to the level essential for success in college courses. The authors claim that the text material and personalized assignments help students learn how to think, learn, and remember. They further claim that their overall goal is to provide the basis necessary to help students achieve their potential by becoming better educated and more productive individuals. This is an excellent book. Particularly useful is Part III -- college reading and study skills.

Joffe, I.L. Achieving success in college. Wadsworth, 1982. 239p. (LB 2395.J55 1982)

This is a narrative that encompasses all the standard means for becoming successful in college. The first part is concerned with how information is organized and how we understand that information. Also covered are: how to outline; how to take notes; how to study a chapter in a textbook; and how to make use of the library. The second part considers some of the practical and psychological aspects of college survival.

Lenier, M. and Maker, J. Keys to college success: reading and study improvement. Prentice-Hall, 1980. 371p. (LAC LB 2395.L447 1980 and LB 2395.L447)

A student can learn "how to learn" by using techniques taught in this book. Each chapter contains skills instruction and an additonal reading selection followed by questions to check comprehension. The book consists of three units: keys to self-direction; keys to effective reading; and keys to effective study.

MacFarlane, P. and Hodson, S. Studying effectively and efficiently: an integrated system. University of Toronto, 1983. 46p. (in RDC Bookstore)

There are countless books related to study procedures, yet in only 46 pages the authors highlight almost all that is necessary for a student to improve study and work habits. Topics include: concentration; time scheduling; listening and lecture notetaking; reading and learning from textbooks; preparing for and writing exams; writing papers; and memory and learning processes. This is a valuable and readable reference.

McWhorter, K.T. College reading and study skills. 2nd ed. Little, Brown, 1983. 375p. (LAC LB 2395.M37 1983)

An extremely comprehensive resource. Presented are the basic techniques for successful reading comprehension and efficiency; studying; notetaking; writing assignments and research papers; and taking exams. All selected reading and study skills have clear and direct application to a student's course work. The author believes that reading and study skills are inseparable and the book is laid out accordingly.

Norman, M.H. and Norman, E.S.K. How to read and study for success in college. 3rd ed. Holt, Rinehart and Winston, 1981. 318p. (LAC LB 2395.N67 1981)

A good book -- designed for a serious adult returning to school. Any student could use this book. The authors point out the methods, the techniques, and the skills that add up to good reading and writing skills. Each of the fourteen chapters contains exercises and activities designed to enable the student to learn without outside help. The exercises, as well, force the reader to think.

Phillips, A.D. and Sotiriou, P.E. Steps to reading proficiency: preview skimming, rapid reading, skimming and scanning, critical and study reading. Wadsworth, 1982. 442p. (LAC LB 1050.P48 1982 and LB 1050. P48 1982)

Six discrete skills that the authors believe are essential for adult reading are presented in a sequenced manner. Each skill is presented through a carefully planned progression. The skills are: rapid reading, preview reading, overview skimming, scanning, critical reading, and study reading.

Phipps, R. The successful student's handbook: a step-by-step guide to study, reading, and thinking skills. University of Washington Press, 1983. 172p. (LAC LB 2395.P54 1983 and LB 2395.P54 1983)

This is a basic textbook in the area of study and reading skills. Students are taken step-by-step through the entire process, starting with chapters on motivation and scheduling. Next, the basic skills of notetaking, memorization, cross-referencing, and test taking are introduced. Three chapters are devoted to reading skills. Other chapters include outlining and summarizing, as well as consolidating lecture notes and outside reading notes. Most appropriate for an individual who has no idea where to begin.

Postman, R.D., et al. College reading and study skills. Macmillan, 1985. 324p. (LAC LB 2395.P67 1985)

The basic reading skills needed for college are taught in this book. The chapters in this book can be seen in four parts. Chapters 1 to 9 develop basic vocabulary and reading techniques. Chapters 10 to 14 give suggestions for reading in the different content areas. Chapters 15 to 18 discuss critical reading and present techniques for identifying biased writing. The remaining chapters focus on notetaking, study skills, and the use of the library.

Raygor, A.L. and Wark, D.M. Systems for study. 2nd ed. McGraw-Hill, 1980. 205p. (LAC LB 2395.R38 1980)

This is a hard-nosed book. The authors know how a student can be successful in college and they say so. One of the primary objectives of this book, claim the authors, is to spell out the implications of what has been learned in the psychological laboratory for the everyday study behaviours of students. They do this well. Themes such as college orientation; listening and notetaking; time scheduling; writing a term paper; and studying foreign languages are presented in a believable manner. In total there are sixteen chapters -- all excellent.

Tabberer, R. and Allman, J. Introducing study skills: an appraisal of initiatives at 16+. Nelson, 1983. 198p. (LAC LB 1049.T3 1983)

This report of a three-year research project into the teaching of study skills undertaken at the National Foundation for Educational Research (Great Britain) is essential reading for any instructor interested in learning or study skills. The findings of the project support the concept of integrating learning skills into existing programs. Furthermore, the reader is introduced to a wide variety of study techniques. In every case, the student reaction to the technique is reported.

Walter, T. and Siebert, A. Student success: how to succeed in college and still have time for your friends. 3rd ed. Holt, Rinehart and Winston, 1984. 175p. (LB 2395.W35 1984)

The fact that this book is in its fourth edition is an indication of its success. It is a thoughtful and readable book that any college student should find interesting and informative. The authors, who are psychologists, set three objectives. They believe the book must:
1. give the student who uses it a better chance of graduation with a good education than those who do not use it.
2. provide each student with specific, practical study skills that show how to quickly gain an understanding of the material in each course and how to get good grades.
3. enhance self-development. It must help each student take control of his or her lifelong educational and personal development.
In an engaging and forthright manner, the authors achieve their objectives. Highly recommended for student reading.

Wolf, C.E. and Wolf, R. Basic library skills. 2nd ed. McFarland, 1986. 141p. (Z 718.7 W64 1986)

The book is designed to be a self-contained short course in the use of the library. It is intended to provide a quick and easy way to do library research. Sample chapters are: a walking tour of the library; the card catalogue; bibliography; general information sources; periodicals and newspapers; and hints for writing papers. Each chapter contains a list of relevant important books. The authors appear to succeed admirably in their goals.

Wood, N.V. College reading and study skills: a guide to improving academic communication. 2nd ed. Holt, Rinehart and Winston, 1982. 271p. (LAC LB 2395.W63 1982)

A useful book. The author reports positive results after testing more than 3,000 students who used this book. The material follows the sequence of tasks that students are expected to perform when they enroll in college. The sections are indicative of the content: getting started; going to class; reading the textbook; taking exams; writing the paper; and summary.

AV Materials in the LRC:

Exam preparation and writing. (video recording) University of Guelph, 1980. 37 min. + study book + teacher's guide. (MEDIA LB 2395.E95)

Viewers need to use pages from the study book. Viewer would be better prepared to write and study for examinations after viewing this video.

Following directions: an activity pack. (sound recording) J. Weston Walch, 1985. 60 min. + study guide + 20 spirit masters. (MEDIA LB 1050.45.F6)

The spirit masters could be xeroxed for classroom use. Interesting exercises are provided which teach a person to better follow oral and written directions.

How to get the most from what you read: using clue words to unlock meaning. (slides) Center for Humanities, 1978. 160 slides + 2 cassettes + 2 recordings + teacher's guide. (MEDIA LB 1050.45.H7)

This multi-media program is intended to help students understand a basic reading skill -- relating ideas. The following relationship patterns are explained: sequence, comparison/contrast, cause/effect, simple listing. The student activity book is an integral component of the learning process. It is fairly cognitive, but a student would be a better reader after working carefully through this program.

How to survive in school: note-taking and outlining skills. (filmstrip) Center for the Humanities, 1977. 6 rolls (256 fr.) + 6 audiocassettes (65 mins. total) + teacher's manual. (MEDIA LB 2395.H6)

The program is designed to help students improve their skills in notetaking and outlining, and therefore become more successful in school. The filmstrips are entertaining, yet informative. A student would have to view and listen to all six sections in order to truly benefit. The sections need not be presented all at one time, however. The visual quality is excellent. On a few occasions there is an irritating audio squeal.

Listening and notetaking. (video recording) University of Guelph, 1980. 29 min. (MEDIA LB 2395.L5)

This is an excellent video. Few people can listen properly and this video teaches listening skills well. Any college student would benefit from watching this. The audio and video quality is excellent.

School survival skills: how to study effectively, parts I, II, and III. (slides) Center for Humanities, 1978. 240 slides in 3 carousels + 3 recordings + 3 cassettes. (MEDIA LB 1049.S3 1978)

This program is designed to teach students how to study their textbooks more efficiently and how to manage their time. Parts I and II relate to becoming an active reader. Part III is concerned with effective time planning.

Tackling textbooks. (video recording) Magic Lantern, 1983. 10 min. (MEDIA LB 1050.45.T3)

The problems that an inexperienced student encounters are demonstrated. The SQ4R method is then taught. A brief but useful presentation with excellent video and audio quality.

Test-taking skills: effective study techniques. (slides) Center for Humanities, 197/. 160 slides + 2 cassettes. (MEDIA LB 1049.T4)

This program is designed to teach students a specific set of skills -- how to study for and take essay and objective tests. Some excellent suggestions are presented.

Time management. (video recording) University of Guelph, 1980. 25 min. (MEDIA LB 2395.T5)

Demonstrated vividly in this video are many of the things a student should not do when studying. It should have an impact on viewers. Sensible time management techniques are then described and demonstrated. A useful introduction for a beginning college student. The technical quality of the video and audio is excellent.

Articles in the LRC:

** Birken, M. "Teaching students how to study mathematics: a classroom approach." Mathematics Teacher, 79:410-413, September 1986. (QA 1.M43)

* Browning, N.F. "Journal writing: one assignment does more than improve reading, writing and thinking." Journal of Reading, 30:39-44, October 1986. (LB 1573.A1 J86)

** Cronin, M.E. and Currie, P.S. "Study skills: a resource guide for practioners." Remedial and Special Education, 5:61-69, March/April 1984. (HV 3004.I68)

Crowley, A.V. "Using journal writing to monitor study skills." [college level], Journal of Developmental and Remedial Education, 7:21-23, Spring 1984. (LB 1029.R4 J6)

Finley, C.D. and Seaton, M.N. "Using text patterns and question prediction to study for tests." Journal of Reading, 31:124-132, November 1987. (LB 1573.A1 J86)

** Hersh, R.L. "The psychology of study skills: a necessary program in support of educational excellence." Educational Technology, 24:44-45, May 1984. (LB 1043.E33)

Kristine, F.J. "Developing study skills in the context of the general chemistry course: the prelecture assignment." Journal of Chemical Education, 62:509-510, June 1985. (QD 1.J66)

** Langer, J.A. "Learning through writing: study skills in the content areas." Journal of Reading, 29:400-406, February 1986. (LB 1573.A1 J86)

** Lindquist-Sandmann, A. "A metacognitive strategy and high school students: working together." Journal of Reading, 30:326-332, January 1987. (LB 1573.A1 J86) filed under "METACOGNITION"

** Malena, R.F. and Coker, K.J.A. "Reading *o*mprehension: the missing elements." Journal of Developmental Education, 10:24-25+, January 1987. (LB 1029.R4 J6)

** Marshak, D. "Study skills: their values and why they should be taught." NASSP Bulletin, 68:103-107, January 1984. (L 13.N28)

** Pintrich, P.R. "Teaching a course in learning to learn." Teaching of Psychology, 14:81-86, April 1987. (BF 77.T43)

* Sherman, T.M. "Learning improvement programs: a review of contollable influences." Journal of Higher Education, 56:85-100, January/February 1984. (LB 2300.07)

** Skelhorne, J. "Factors contributing to success in university." Orbit, 15(1):7-8, February 1984. (LB 1028.07)

** Smith, R.M. "Helping adults learn how to learn." [symposium] New Directions Continuing Education, 19:1-103, 1983. (LC 5201.N4)

** Wade, S.E. "A synthesis of the research for improving reading in the social studies." Review of Educational Research, 53:461-497, Winter 1983. (LB 1028.R4)

EXAM PREPARATION

Books in the LRC and/or the LAC:

Divine, J.H. and Kylen, D.W. How to beat test anxiety and score higher on your exams. Barron's Educational Series, 1979. 134 p. (LAC LB 3051.D57 1979)

The test anxiety factor is discussed in plain language and useful tips to alleviate anxiety are presented. More than fifty pages are also devoted to test-taking skills. The "tips" presented could be easily learned and would certainly help a student.

Feder, B. The complete guide to taking tests. Prentice-Hall, 1979. 160 p. (LB 3501.F4 1979)

A very readable book. Most students would benefit from reading it. If they did, instructors could be in trouble! Loopholes in true-false, multiple choice, reading comprehension, completion, matching, and essay exams are revealed. Students are then shown how to use them to their advantage. A broad range of proven and pragmatic examination techniques are demonstrated.

Grassick, P. Making the grade: what you need to know about and how to prepare for and write tests. Macmillan, 1983. (LB 3060.57.G73 1983 and LAC LB 1049.G73 1983)

Particularly recommended for adults returning to school, although the book is suitable for all students. A serious look at an important topic. Readers are taught how to prepare for exams and how to write a variety of tests. The notion of anxiety is discussed realistically. Highly recommended.

Articles in the LRC:

Altmaier, E.M. and Woodward, M. "Group vicarious desensitization of test anxiety." Journal of Counseling Psychology, 28:467-469, September 1981. (BF 637.C6 A2)

Bander, R.S. et al. "Comparison of cue-controlled relaxation and study skills counseling in the treatment of mathematics anxiety." Journal of Educational Psychology, 74:96-103, February 1983. (LB 1051.A2 J6)

Benjamin, M. et al. "Test anxiety: deficits in information processing." Journal of Educational Psychology, 73:816-824, December 1981. (LB 1051.A2 J6)

** Culler, R.E. and Holahan, C.J. "Test anxiety and academic performance: the effects of study-related behaviors." Journal of Educational Psychology, 72:16-20, February 1980. (LB 1050.A2 J6)

** Finley, C.D. and Seaton, M.N. "Using text patterns and question prediction to study for tests." Journal of Reading, 31:124-132, November 1987. (LB 1573.A1 J86)

Hunter, W.J. "Getting wise to test anxiety." School Guidance Worker, 40(4): 12-16, March 1985. (LB 1027.5.S3)

Kubistant, T. "Test performance: the neglected skill." [performance anxiety], Education, 102:53-55, Fall 1981. (L 11.E3)

* Middleton, J.L. "I just can't take tests!" Science Teacher, 52:34-35, February 1985. (Q 181.S38)

Trimble, R.W. and Carter, C.A. "Test anxiety workshop using undergraduates as leaders." Personnel and Guidance Journal, 59:173-175, November 1980. (HF 5549.A2 P4)

MAPPING

Books in the LRC:

Heimlich, J.E. and Pittelman, S.D. Semantic mapping: classroom applications. International Reading Association, 1986. 48 p. (LB 1050.45.H45 1986)

An excellent, brief introduction to the topic of semantic mapping. Any instructor interested in improving students' reading, writing, and thinking will be interested in this volume. Several practical classroom suggestions for the use of semantic mapping are presented, as are five applications of mapping in the classroom. These suggestions and applications are easily transferable to an instructor's own students and subjects. Further suggested readings are also provided.

Novak, J.D. and Gowin, D.B. Learning how to learn. Cambridge University Press, 1984. 199p. (LB 1049.N68 1984)

Presented is theoretical and practical information about two educational tools -- Concept Mapping and Knowledge Vee diagramming. Mapping, it is claimed, is a way to help educators and students see the meaning of learning materials. Vee diagramming is a way to help students and educators penetrate the structure and meaning of the knowledge they seek to understand. Fascinating, although somewhat heavy reading. The book does provide strategies for introducing these concepts in the classroom, applications in a variety of discipline areas, and further uses for the two tools.

Articles in the LRC:

** Arnaudin, M.W. et al. "Concept mapping in college science teaching." [learning strategy developed by J.D. Novak] Journal of College Science Teaching, 14:117-121, November 1984. (Q 181.A1 J5)

** Artinian, B.M. "Guiding students in theory development through conceptual mapping." Journal of Nursing Education, 24:156-158, April 1985. (RT 71.J5)

* Ault, C.R. "Concept mapping as a study strategy in earth science." Journal of College Science Teaching, 15:38-44, September/October 1985. (Q 181.A1 J5)

** Cliburn, J.W. "Using concept maps to sequence instructional materials." Journal of College Science Teaching, 15:377-379, February 1986. (Q 181.A1 J5)

* Johnson, D.D. et al. "Semantic mapping." Reading Teacher, 39:778-783, April 1986. (LB 1573.R28)

Malone, J. and Dekkers. "The concept map as an aid to instruction in science and mathematics." School Science and Mathematics, 84:220-231, March 1984. (Q 1.S28)

** Miccinati, J.L. "Mapping the terrain: connecting reading with academic writing." Journal of Reading, 31:542-552, March 1988. (LB 1573.A1 J86)

* Novak, J.D. "Application of advances in learning theory and philosophy of science to the improvement of chemistry teaching." [concept mapping using Gowin's Vee] Journal of Chemical Education, 61:607-612, July 1984. (QD 1.J66)

Schwartz, R.M. and Raphael, T.E. "Concept of definition: a key to improving students' vocabulary." [using semantic word maps] Reading Teacher, 39:198-205, November 1985. (LB 1573.R28)

** Sinatra, R. et al. "Using semantic mapping after reading to organize and write original discourse." Journal of Reading, 30:4-13, October 1986. (LB 1573.A1 J86)

METACOGNITION

Articles in the LRC:

** Bondy, E. "Thinking about thinking: encouraging children's use of metacognitve processes." Childhood Education, 60:234-238, March/April 1984. (LB 1141.C5)

Garofalo, J. "How do you know what you know? Metacognitive modeling in the content areas." Journal of Reading, 29:415-422, February 1986. (LB 1573.A1 J86)

** Lindquist-Sandmann, A. "A metacognitive stategy and high school students: working together." Journal of Reading, 30:326-332, January 1987. (LB 1573.A1 J86)

** Long, J.D. and Long, E.W. "Enhancing student achievement through metacomprehension training." Journal of Developmental Education, 11:2-5, September 1987. (LB 1029.R4 J6)

Morgan, M. "Self-monitoring of attained subgoals in private study." Journal of Educational Psychology, 77:623-630, December 1985. (LB 1051.A2 J6)

** Palincsar, A.S. "Metacognitive strategy instruction." Exceptional Children, 53:118-124, October 1986. (LC 3981.E9)

Palincsar, A.S. and Brown, D.A. "Enhancing instructional time through attention to metacognition." Journal of Learning Disabilities, 20:66-75, February 1987. (LB 1134.J68)

** Spring, H.T. "Teacher decisionmaking: a metacognitive approach." Reading Teacher, 39:290-295, December 1985. (LB 1573.R28)

** Weinstein, C. "Learning strategies: the metacurriculum." Journal of Developmental and Remedial Education, 5(2):6-7+, 1982. (LB 1029.R4 J6)

** Weinstein, C. and Rogers, B.T. "Comprehension monitoring: the neglected learning strategy." Journal of Developmental Education. 9(1):6-9+, 1985. (LB 1029.R4 J6)

Wiens, J.W. "Metacognition and the adolescent passive learner." Journal of Learning Disabilities, 16:144-149, March 1983 (LB 1134.J68)

NOTETAKING

Books in the LRC:

Brown, D. Notemaking. Gage, 1977. 245p. (LB 2395.B7)

A useful reference for a beginning college student. The benefits of notemaking training are discussed, as are mechanics and the concept of notecodes. The chapter about essay research and writing should be beneficial to a student. The chapters related to notemaking at meetings, in discussions, and in the classroom could make a student much more efficient at a skill that few people possess to an adequate degree.

Davis, A. and Clark, E.G. T-notes and other study skills. 2nd ed. Davis and Clark Publishing Co., 1986. 76p. (LB 1049.D38 1986)

-- see annotation under "STUDY SKILLS"

AV Materials in the LRC:

How to survive in school: note-taking and outlining skills. (filmstrip) Center for the Humanities, 1977. 6 rolls (256 fr.) + 6 cassettes (65 min.) + teacher's manual. (MEDIA LB 2395.H6)

-- see annotation under "STUDY SKILLS"

Listening and notetaking. (video recording) University of Guelph, 1980. 1 cassette (29 min.). (MEDIA LB 2395.L5)

-- see annotation under "STUDY SKILLS"

Articles in the LRC:

Baker, L. and Lombardi, B.R. "Students' lecture notes and their relation to test performance." Teaching of Psychology, 12:28-32, February 1985. (BF 77.T43)

** Barnett, J.E. et al. "What is learned in note taking?" Journal of Educational Psychology, 73:181-192, April 1981. (LB 1051.A2 J6)

Bretzing, B.H. and Kulhavy, R.W. "Note-taking and passage style." Journal of Educational Psychology, 73:242-250, April 1981. (LB 1051.A2 J6)

Carrier, C. et al. "The effects of facilitative and debilitative achievement anxiety on notetaking." Journal of Educational Research, 77:133-138, January/February 1984. (LB 1028.J62)

Einstein, G.O. et al. "Note-taking, individual differences, and memory for lecture information." Journal of Educational Psychology, 77:522-532, October 1985. (LB 1051.A2 J6)

** Fowler, R.W. "Note-making in social studies." History and Social Science Teacher, 20:91-93, Spring 1985. (H 62.A1 H5)

** Lindquist-Sandmann, A. "A metacognitive strategy and high school students: working together." Journal of Reading, 30:326-332, January 1987. (LB 1573.A1 J86) filed under "METACOGNITION"

Maqsud, M. "Effects of personal lecture notes and teacher notes on recall of university students." Journal of Educational Psychology, 50:289-294, November 1980. (LB 1051.A2 J6)

Peck, K.L. and Hannafin, M.J. "The effects of note-taking pretraining and the recording of notes on the retention of aural instruction." Journal of Educational Research, 77:100-107, November/December 1983. (LB 1028.J62)

Peper, R.J. and Mayer, R.E. "Generative effects of note-taking during science lectures." Journal of Educational Psychology, 78:34-38, February 1986. (LB 1051.A2 J6)

Rickards, J.P. "Notetaking, underlining, inserted questions, and organizers in text: research conclusions and educational implications." Educational Technology, 20:5-11, June 1980. (LB 1043.E33)

Twining, J.E. "Generating a note-taking schema." Journal of Developmental Education, 9(1):14-15+, 1985. (LB 1029.R4 J6)

READING, WRITING, AND THINKING ACROSS THE CURRICULUM

Books in the LRC:

Griffin, C. Williams, ed. Teaching writing in all disciplines. Jossey-Bass Inc., 1982. (LB 1025.2 N49 no. 12)

An excellent exploration of the writing across the curriculm concept. The ten articles provide rationales for incorporating writing and many suggestions about how to begin. The volume provides information for the following disciplines: English, physics, finance, mathematics, psychology, nursing, architecture, history, and business. There are also extensive bibliographies at the end of each chapter.

Robinson, Alan H. Teaching reading and study strategies: the content areas. Allyn Bacon, Inc., 1975. (LB 1632 R62)

This book is primarily aimed at secondary school instructors, but is a useful resource for college instructors too. The following topics are explained. Strategies for teaching the ideas are also suggested:
1. Evaluation: of processes (for obtaining ability/knowledge) and product on an ongoing basis.
2. Readiness techniques: preparation needed to read and study.
3. Vocabulary strategies: functions of language (in general and in relation to content areas).
4. Comprehension strategies: comprehending larger blocks of print, organizational concepts, and styles or patterns of writing.
5. Utilization tasks: using what has been read -- reacting to and critically evaluating.
Individual chapters on science, social studies, mathematics, and English suggest strategies that can be used in these classes to encourage appropriate learning skills.

Articles in the LRC:

** Atkinson, G.F. "Writing among other skills." Journal of Chemical Education, 63:337-338, April 1986. (QD 1.J66)

** Beers, S.E. "Use of a portfolio writing assignment in a course on developmental psychology." Teaching of Psychology, 12:94-96, April 1985. (BF 77.T43)

* Burton, G.M. "Writing as a way of knowing in a mathematics education class." Arithmetic Teacher, 33:40-45, December 1985. (QA 135.A6)

Carella, M.J. "Philosophy as literacy: teaching college students to read critically and write cogently." College Composition and Communication, 34:57-61, February 1983. (PE 1001.C6)

** Dittmer, A. "Guidelines for writing assignments in the content areas." English Journal, 75:59-63, April 1986. (PE 1.E56)

** Duke, C.R. "Integrating reading, writing, and thinking skills into the music class." Journal of Reading, 31:152-157, November 1987. (LB 1573.A1 J86)

** Emig, J. "Writing as a mode of learning." College Composition and Communication, 28:122-128, May 1977. (PE 1001.C6)

** Frager, A.M. "Content area writing: are you teaching or testing?" Journal of Reading, 29:58-62, October 1985. (LB 1573.A1 J86)

** Fulwiler, T. "Journals across the disciplines." English Journal, 69:14-19, December 1980. (PE 1.E56)

** Goodman, M.R. and Lanser, S. "The teaching of writing in political science: defining a stronger disciplinary role." Teaching Political Science, 14:60-66, Winter 1987. (JA 86.T4)

** Herrington, A.J. "Classrooms as forums for reasoning and writing." College Composition and Communication, 36:404-413, December 1985. (PE 1001.C6)

Herrington, A.J. "Writing to learn: writing across the disciplines." College English, 43:379-387, April 1981. (PE 1.C6)

** Johnson, M.L. "Writing in mathematics classes: a valuable tool for learning." Mathematics Teacher, 76:117-119, February 1983. (QA 1.M43)

** Kirkpatrick, L.D. and Pittendrigh, A.S. "A writing teacher in the physics classroom." Physics Teacher, 22:159-164, March 1984. (QC 30. P48)

** Konopak, B.C. et al. "Reading and writing: aids to learning in the content areas." Journal of Reading, 31:109-115, November 1987. (LB 1573.A1 J86)

* Mallonee, B.C. and Breihan, J.R. "Responding to students' drafts: interdisciplinary consensus." College Composition and Communication, 36:213-231, May 1985. (PE 1001.C6)

** Meislich, E.K. "Requiring good writing in chemistry courses." Journal of Chemical Education, 64:505-506, June 1987. (QD 1.J66)

** Mett, C.L. "Writing as a learning guide in calculus." Mathematics Teacher, 80:534-537, October 1987. (QA 1.M43)

Myers, J.W. "Writing to learn across the curriculum." Phi Delta Kappa Fastbacks, 209:7-36, 1984. (LB 41.G4 -- on the Faculty Professional Development carrel, 2nd floor of the LRC)

Nahrgang, C.L. and Petersen, B.T. "Using writing to learn mathematics." Mathematics Teacher, 79:461-465, September 1986. (QA 1.M43)

** Powell, A. "A chemist's view of writing, reading, and thinking across the curriculum." College Composition and Communication, 36:414-418, December 1985. (PE 1001.C6)

Smith, B.L. "Writing across the curriculum." [symposium] Current Issues in Higher Education, 3:1-38, 1983/84. (LB 2300.C87)

** Snodgrass, S.E. "Writing as a tool for teaching social psychology." Teaching of Psychology, 12:91-94, April 1985. (BF 77.T43)

Tamura, E.H. and Harstad, J.R. "Freewriting in the social studies classroom." Social Education, 51:256-259, April/May 1987. (H 62.S6)

** VanOrden, N. "Critical - thinking writing assignments in general chemistry." Journal of Chemical Education, 64:506-507, June 1987. (QD 1.J66)

** Vukovich, D. "Ideas in practice: integrating math and writing through the math journal." Journal of Developmental Education, 9(1): 19-20, 1985. (LB 1029.R4 J6)

** "Writing in the sciences." [symposium] Journal of College Science Teaching, 16:245-269, February 1987. (Q 181.A1 J5)

NOTE: There are also several bibliographies on this subject at the beginning of the "Across the Curriculum" binder in the Learning Assistance Centre.

TIME MANAGEMENT AND PROCRASTINATION

Books in the LRC or the LAC:

Burka, J.B. and Yuen, L.M. Procrastination: why you do it, what to do about it. Addison-Wesley, 1983. (BF 575.P95 B87 1983)

A detailed and fascinating explanation of the procrastination topic. This book would be helpful for some students to read. It can also help instructors to understand why assisting a student with time scheduling or using other traditional time management approaches is not enough for some students.

Christ, F.L. Seven steps to better management of your study time. Personal Efficiency Programs, 1981. 1 vol. (looseleaf). (LB 2395.C477 1981)

This booklet is sold at the RDC Bookstore. Any student would be well-advised to buy the booklet and follow the seven steps that are described in order to organize their time effectively.

Lakein, A. How to get control of your time and your life. New American Library, 1973. (LAC HN 90.T5 L34 1973)

One of the few books available related to time management that would be useful to a college student. Well worth reading by anyone interested in making better use of their time.

Articles in the LRC:

** Burka, J.B. and Yuen, L.M. "How to stop procrastinating in two weeks: excerpt from Procrastination: why you do it, what to do about it." Chatelaine, 57:64, 98-100, March 1984. (AP 5.C45)

** Burka, J.B. and Yuen, L.M. "Mind games procrastinators play." Psychology Today, 16:32-34+, January 1982. (BF 1.P79)

Reiser, R.A. "Reducing student procrastination in a personalized system of instruction course." Educational Communication and Technology, 32:41-49, Spring 1984. (LB 1043.A8)

Rothblum, E.D., et al. "Affective, cognitive, and behavioral differences between high and low procrastinators." Journal of Counseling Psychology, 33:387-394, October 1986. (BF 637.C6 A2)

Silver, M. and Sabini, J. "When it's not really procrastination." Psychology Today, 16:39-40+, January 1982. (BF 1.P79)

Solomon, L.J. and Rothblum, E.D. "Academic procrastination: frequency and cognitive-behavior correlates." Journal of Counseling Psychology, 31:503-509, October 1984. (BF 637.C6 A2)

Steele, K.L., et al. "Managing the procrastination syndrome in self-paced instruction." Educational Technology, 20:46-49, September 1980. (LB 1043.E33)

** Zinger, D.J. "Procrastination: to do or not to do?." School Guidance Worker, 39:9-15, September 1983. (LB 1027.5.S3)

INTEGRATING LEARNING SKILLS INTO THE CURRICULUM

A WORKBOOK

by

Glynis Wilson Boultbee
and
Robert Anderson

Red Deer College

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INTRODUCTION

This workbook is yours to keep. Write in it. Add to it. Do whatever you need to do so that it is a useful record of your investigations into the field of learning skills. If you have any questions about how the workbook is to be used, feel free to call Glynis Wilson Boultbee (at 342-3168).

MODULE ONE

OBJECTIVES A and B

SELF-TEST

In your own words, define the term "learning skills" and define "attitudinal abilities" and "metacognitive abilities" as they relate to learning.

LEARNING SKILLS -

ATTITUDINAL ABILITIES -

METACOGNITIVE ABILITIES -

EVALUATION

Compare your answer to Information Sheet #1 in MODULE ONE of the Handbook. If you have missed any important ideas, note them down on this page.

MODULE ONE

OBJECTIVE C

SELF-TEST

Fill in the following chart identifying the specific skills and abilities which fall under the broad categories indicated. Try to think of some skills or abilities which were not mentioned on Information Sheet #2 of MODULE ONE.

LEARNING SKILLS

Input:

Processing:

Output:

ATTITUDINAL ABILITIES

METACOGNITIVE ABILITIES

EVALUATION

Compare your answer to Information Sheet #2 in MODULE ONE of the Handbook. If you have missed any important ideas, note them down on this page.

MODULE ONE

OBJECTIVE D

SELF-TEST

Fill in the following chart. You may wish to refer back to Information Sheet #3 in MODULE ONE of the Handbook for ideas. However, do try to think of some other ideas, too.

FORMATS FOR TEACHING LEARNING SKILLS	PROS	CONS
Individual Assistance		
Workshop		
Self-Instructional Modules		
In-Class Presentations		
Integration into the Curriculum		

NOTE: An answer key is on the following page. If you would rather simply read the key, turn the page.

MODULE ONE

OBJECTIVE D

SELF-TEST ANSWER KEY

FORMATS FOR TEACHING LEARNING SKILLS	PROS	CONS
INDIVIDUAL ASSISTANCE	* good for students needing personal and/or long term instruction * flexible to meet needs of individual student	* time intensive * impossible to provide for all students * not all students who need it will ask for assistance
WORKSHOPS	* good for students needing quick overview * useful as introduction to students who might not otherwise pursue individual assistance	* less personal approach - may not address needs of individuals * not all students who need it will attend
SELF-INSTRUCTIONAL MATERIALS	* flexible * students can work independently * can address different types of learner (eg. auditory)	* poor time management or low commitment may result in students not completing program * not all students who need it will get involved
IN-CLASS PRESENTATIONS	* all students in class receive instruction - including those who don't know they need it * instruction perceived as relevant - particularly if emphasized by instructor	* can be perceived as separate from content * inflexible because an outsider is scheduled ahead - timing may not be best possible
INTEGRATION INTO THE CURRICULUM	* all students in class receive instruction - including those who don't know they need it * instruction perceived as integral and relevant because instructor can constantly explain relevance * flexible - instructor can build in instruction at appropriate time for the group * requires planning and organization on part of instructor - which may result in more effective course	* may not address needs of student needing long term, personal instruction

MODULE TWO

OBJECTIVE A

LEARNING ACTIVITY #1: RESOURCE LIST

On this page, list the resources you would like to review initially. We suggest a list of 2 to 5 resources as a start. If you haven't done much work on learning skills before, begin with the books. Ellis and McWhorter introduce a variety of learning skills to students, while the others are written for instructors.

1.

2.

3.

4.

5.

MODULE TWO

OBJECTIVE A

FILE NOTES ON INITIAL READINGS HERE

MODULE TWO

OBJECTIVE B

LEARNING ACTIVITY #2: LIST OF RDC PEOPLE

On this page, list the people you would like to consult initially. We suggest a list of 2 to 4 people as a start.

NAME	PHONE
1.	
2.	
3.	
4.	

MODULE TWO

OBJECTIVE B

FILE NOTES ON INTERVIEWS WITH RDC PEOPLE HERE

MODULE TWO

OBJECTIVE C

LEARNING ACTIVITY #3: CHECKLIST OF LEARNING SKILLS

Learning Skill	Students should have already	Students usually have already	Students need to review in program	Students need to learn in program
1. listening	—	—	—	—
2. viewing	—	—	—	—
3. reading	—	—	—	—
4. memorizing	—	—	—	—
5. preparing for exams	—	—	—	—
6. writing exams	—	—	—	—
7. asking questions	—	—	—	—
8. researching	—	—	—	—
9. textbook notetaking	—	—	—	—
10. lecture notetaking	—	—	—	—
11. using the library	—	—	—	—
12. problem solving	—	—	—	—
13. writing	—	—	—	—
14. speaking	—	—	—	—
15. dealing with procrastination	—	—	—	—
16. developing motivation	—	—	—	—
17. developing confidence	—	—	—	—
18. concentrating	—	—	—	—
19. developing self-discipline	—	—	—	—
20. knowing own learning style	—	—	—	—
21. managing time	—	—	—	—
22. setting goals	—	—	—	—
23. setting priorities	—	—	—	—
24. monitoring effectiveness of study habits	—	—	—	—
25. correcting learning problems	—	—	—	—
26.	—	—	—	—
27.	—	—	—	—
28.	—	—	—	—
29.	—	—	—	—
30.	—	—	—	—

MODULE TWO

OBJECTIVE C

LEARNING ACTIVITY #4: LIST OF RESOURCES

On this page, list the resources you would like to review when selecting the learning skills to teach your students. We suggest a relatively short list initially. Do not exceed 14 items.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

MODULE TWO

OBJECTIVE C

FILE NOTES ON READINGS FROM RESOURCE LIST HERE

MODULE TWO

OBJECTIVE C

FILE NOTES FROM INTERVIEWS WITH STUDENTS HERE

MODULE TWO

OBJECTIVE C

LEARNING ACTIVITY #5: LIST OF LEARNING SKILLS

On this page, list the learning skills which you plan to cover in your course/program. (Be realistic!)

1.

2.

3.

4.

5.

6.

7.

MODULE TWO

OBJECTIVE D

LEARNING ACTIVITY #6: LIST OF BROAD OBJECTIVES

SAMPLE: LEARNING SKILL: monitoring effectiveness of study habits

BROAD OBJECTIVE: While reading or studying, the student will be able to monitor the effectiveness of his/her study behaviours.

1. LEARNING SKILL:

   BROAD OBJECTIVE:

2. LEARNING SKILL:

   BROAD OBJECTIVE:

3. LEARNING SKILL:

   BROAD OBJECTIVE:

4. LEARNING SKILL:

   BROAD OBJECTIVE:

5. LEARNING SKILL:

   BROAD OBJECTIVE:

6. LEARNING SKILL:

   BROAD OBJECTIVE:

7. LEARNING SKILL:

   BROAD OBJECTIVE:

MODULE TWO

OBJECTIVE E

LEARNING ACTIVITY #7: EVALUATION QUESTIONS

You may wish to refer back to Information Sheet #3 of MODULE TWO in the Handbook when answering these questions.

1. What elements of the learning skills component will you evaluate?

2. When will you evaluate?

3. What type(s) of evaluation will you use?

MODULE TWO

OBJECTIVE E

FILE YOUR EVALUATION INSTRUMENTS HERE

MODULE TWO

OBJECTIVE F

LEARNING ACTIVITY #8: MOTIVATION PLANNING QUESTIONS

Answer the following questions when planning instructional activities for your learning skills component.

1. What can I do initially to encourage a positive attitude toward the learning skills component of my course/program?

2. How can the learning skills component be designed to be stimulating for the learners?

3. How can the affective experience and emotional climate for the learning skills component be made positive for the learners?

4. How can the learning skills component be designed to increase or affirm the learners' feelings of competence?

5. What else can I do to motivate the students during the lessons?

6. Will I provide reinforcement or rewards for my learners? If so, what are they?

adapted from Enhancing Adult Motivation to Learn by Raymond J. Wlodkowski

MODULE TWO

OBJECTIVE G

SELF-TEST

Fill in the following page. You may wish to refer back to Information Sheet #7 in MODULE TWO of the Handbook. At this time, you may also wish to change the order of the process to suit your own planning style.

THE PLANNING PROCESS

1.

2.

3.

4.

5.

6.

7.

EVALUATION

Compare your answer to Information Sheet #7 in MODULE TWO of the Handbook.

MODULE TWO

OBJECTIVE G

LEARNING ACTIVITY #9: SAMPLE INSTRUCTIONAL PLANS FOR INTEGRATION

==========

COURSE: Psychology 337

LEARNING SKILLS OBJECTIVE: The students will identify time management problems resulting from procrastination and reflect on consequences.

CONTENT MATERIAL: Unit on self-defeating behaviours and self image.

RATIONALES FOR LEARNING SKILLS:
* procrastination can cause poor academic performance and high stress levels
* identifying own patterns is first step to dealing with procrastination
* reflecting on own patterns can result in changes in behaviour and plans for further change

GENERAL PLAN: ask for weekly log reflecting on procrastination; link short paper on self-defeating behaviours to personal reflections on procrastination

PROCEDURES:

1. Discuss theory of procrastination briefly in class. Ask students to reflect on own procrastination patterns. Outline upcoming activities and provide rationales.

2. Hand out log which causes students to reflect on procrastination. Explain it is to be filled in each week for 4 weeks & will be used for short paper.

3. Four weeks later during unit on self-defeating behaviours and self image: Explain students are to write short paper on one aspect of self-defeating behaviours. Part of the paper is to incorporate what they have learned about their own procrastination (or lack of it). They are to hand in logs too. Provide handout explaining expectations and procedures in detail.

5. Return marked papers with feedback on personal comments about procrastination as well as on paper as a whole. Make referrals to LAC or other resources as appropriate.

MATERIALS NEEDED: handout(log), handout outlining short paper

MOTIVATION TECHNIQUES: rationales provided early; connections to content made by students; marks given in part for work on learning skills

COURSE: Social Studies 85

LEARNING SKILLS OBJECTIVE: The students will identify the notetaking technique most suited to their own learning style.

CONTENT MATERIAL: Unit on democracy, fascism, and communism.

RATIONALES FOR LEARNING SKILLS:
* notetaking helps learner become actively involved in the material being learned
* notetaking improves concentration & retention
* notetaking is helpful for later review

GENERAL PLAN: mini-lecture on notetaking; students practice; discuss; further practice; further discussion; journal handed in

PROCEDURES:

1. Quick review of rationales for notetaking and explanation of 3 kinds (mapping, split page method, highlighting).
2. Each student to use one notetaking method for section of text on democracy.
3. Review content. Then ask students to list pros and cons of notetaking method they used.
4. Ask students to switch to another method of notetaking for section on fascism.
5. Review content. Students add to recorded pros and cons for new notetaking method.
6. Ask students to use last notetaking method for section on communism.
7. Review content. Students add to recorded pros and cons for new notetaking method.
8. Ask students to identify and explain their preference of notetaking methods briefly in small groups.
9. Ask students to write a short journal giving at least 3 reasons for their preference.
10. Hand back journals with brief comments and referrals to LAC or other appropriate resources if deemed necessary.

MATERIALS NEEDED: text

MOTIVATION TECHNIQUES: rationales explained; students use skills being taught; students responsible for deciding what works for them; materials relevant to course; may take better notes and therefore improve performance on next test

COURSE: Chemistry 200

LEARNING SKILLS OBJECTIVE: The students will use the mapping notetaking technique to prepare for a test.

CONTENT MATERIAL: the behaviour of gases

RATIONALES FOR LEARNING SKILLS:
* mapping is active form of studying
* allows student to comprehend material by ensuring they understand overall structure
* helps with memorization by providing structure
* helps concentration when dealing with complex, difficult material

GENERAL PLAN: provide model on board when lecturing; mini-lecture; students practise

PROCEDURES:

1. Give introductory lecture on behaviour of gases. Write notes on board or overhead in mapping format.

2. Refering to notes, explain the format used. Explain rationales for mapping as way of preparing for tests. Explain how to do it. Provide one page handout summarizing the technique. Provide two other examples (from previous units) of maps in handout format.

3. Ask students to map a fairly simple reading on the behaviour of gases for next day.

4. Review maps at beginning of next class. Identify one or two good ones to duplicate. Ask students who are good at it to provide clarification of process for those experiencing difficulty. Use maps to determine what to review in class.

5. Provide further opportunity to map within next week.

6. Test students on material they mapped. Point out any improvements in performance which may be attributable to mapping.

7. Provide board notes or unit summaries in mapping format periodically later in term as reminder.

MATERIALS NEEDED: map of introductory lecture; one page summary of mapping technique; two maps from previous units

MOTIVATION TECHNIQUES: rationales explained; relevant material used; maps linked to next test; instructor models technique; students teach fellow students

COURSE: Nursing 200

LEARNING SKILLS OBJECTIVE: The students will use a problem-solving model to answer multiple choice exam questions.

CONTENT MATERIAL: every unit

RATIONALES FOR LEARNING SKILLS:
* problem-solving approach results in better performance on exams
* reduces anxiety because of sense of control
* National exams use same format -- important to approach them in same rational way

GENERAL PLAN: mini-lecture; periodic practice with discussion; reviews after exams

PROCEDURES:

1. Explain problem-solving model theory. Provide students with handout outlining problem-solving model.
2. Explain that multiple choice exam writing can be attacked using model. Provide rationales. Explain how to use problem-solving technique using several sample multiple choice questions.
3. Provide further sample questions for practice at home.
4. Review technique next day and answer any questions.
5. Provide sample questions at end of each unit. Review any problem questions with focus on use of problem-solving to deal with difficult questions.
6. Provide similar review after each exam.

MATERIALS NEEDED: handout on problem-solving; test questions

MOTIVATION TECHNIQUES: rationales provided; links made to National exams; constant end-of-unit review ensures increasing competence in less stressful situation; all materials can be used assist with students' own review for tests

MODULE TWO

OBJECTIVE G

LEARNING ACTIVITY #10: INSTRUCTIONAL PLAN FORMS

On the next two pages, you will find two kinds of forms you can use when making your instructional plans. The first was used in Learning Activity #9 for the sample instructional plans. The second is provided as an alternative. These forms may be amended to suit your own preferences.

INSTRUCTIONAL PLANS FOR INTEGRATION

COURSE:

LEARNING SKILLS OBJECTIVE:

CONTENT MATERIAL:

RATIONALES FOR LEARNING SKILLS:

GENERAL PLAN:

PROCEDURES:

MATERIALS NEEDED:

MOTIVATION TECHNIQUES:

INSTRUCTIONAL PLANS

INTEGRATING _____ INTO _____

RATIONALES:

==========

CONTENT OF COURSE | LEARNING SKILLS COMPONENT | STUDENT & TEACHER ACTIVITY

==========

MOTIVATION TECHNIQUES TO BE USED:

ERIC CLEARINGHOUSE FOR
JUNIOR COLLEGES SEP 15 1989